

THE ROLE OF MUSIC AMONG HEALTHY OLDER PERFORMANCE MUSICIANS

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Title

The Role of Music Among Healthy Older Performance Musicians

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The Supervisory Committee certifies that this *disquisition* complies with North Dakota State University's regulations and meets the accepted standards for the degree of

**DOCTOR OF PHILOSOPHY**

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## ABSTRACT

This qualitative study explored the role of music in the lives of 18 healthy older performance musicians (PMs). PMs began music education in early childhood and developed music competencies of advanced, expert, and virtuoso by voice, instruments, and composing music. The phenomenology approach to data consisted of a 7-item demographic questionnaire, and an 18-semi-structured interview questionnaire. From the themes of community music participation, wellness, and happiness emerged 11 subthemes.

The role of participating in community music validated PMs' music identity. First, values and beliefs explained music was life and a livelihood; second, music participation continued for decades because conductors chose complex repertoires that encouraged learning, and showcased music competencies. Third, camaraderie and enduring relationships sustained social connectedness, and fourth worldwide travel was inherent to performance and socialization.

The role of music and wellness supported PMs' healthy aging through the life course. First, emotional wellness explained sense of self to trust and share emotions with others and aligning views of aging to make adaptations to aging processes when needed. Second, intellectual wellness explained the relationship between complex music and brain health. Third, physical wellness explained personal benefits of physical fitness, nutrition, and intellectual energy to performing music. Fourth, sociological wellness explained PMs' favorite music connected with family, friends, and community.

The role of music and happiness clarified motivations to needing and wanting challenging repertoires. First, lifelong learning of music was resultant to happiness, and, second, happiness was resultant to performing repertoires expertly, and third, performing music was

exhilarating and fun despite the countless hours of practice to perform expertly. This study found that music was critical to PMs' health, happiness, and well-being.

Future research should include audiology because hearing loss is endemic among musicians. Furthermore, establishment of regional U.S. research teams should gather data on yearly cycles, and longitudinal qualitative studies to help build a base of knowledge on PMs, and bridge the gap in literature to reverse the current empty trend. These efforts will help make seminal contributions for all generations and society.

## ACKNOWLEDGEMENTS

My academic journey from music to applied gerontology was the culmination of challenges, stresses, and investments in time, money, and resources. However, the enlightenment and achievements were worth the scope of work and level of effort to self-actualization my objectives and goals as a musician and applied gerontologist. I am grateful to the following people who made these achievements possible.

My gratitude to Music Directors for allowing access to their musicians – and my gratitude to all musicians for sharing their storied lives in this pioneering research study. Your narratives will help to build a base of knowledge on healthy older performance musicians' lifelong learning of music, wellness, and resultant happiness for current and future generations.

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## **DEDICATION**

This study is dedicated to the population of healthy older performance musicians who invest their time, money, and resources to enrich communities throughout the world. Likewise, this study is dedicated to the people who had faith in me to achieve my academic goals.

My heart-filled gratitude to Ardith R. Brunt, PhD, RD for her knowledge and experience in nutrition, wellness, exercise, and aging sciences that championed my research in the promotion of lifelong learning of music, healthy aging, and audiology. These are distinctly different interdisciplinary fields of research, but Dr. Brunt believed in me and was amenable to mentoring my research, writing, eventual publications, and graduation. Because of Dr. Brunt, I am self-actualizing my achievements and dreams.

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## **CHAPTER I. INTRODUCTION**

### **Population Aging**

What used to be an anomaly of aging is the norm in the 21<sup>st</sup>-century. In 1900, economists reported the United States' (U.S.) population was 76 million of which 3 million (4%) attained age 65 and older (U.S. Bureau of the Census, 1996). Whereas, in the year 2000, there were about 282 million of which 35 million (12%) were age 65 and older (U.S. Census Bureau, 2011). Economists explain the increased proportion of older adults living longer were due to decreases in infant and child mortality and increases in immigration (Population Reference Bureau, 2002). The U.S. population in 2050 is predicted to be 458 million (Ortman, Velkoff, & Hogan, 2014) of which 84 million (18.84%) will be age 65 and older (Administration on Aging, 2015). Though predictions bring comfort to many individuals and their families, *preventable* chronic diseases are reducing well-being and life expectancy for 117 million adults ages 65 and older (Centers for Medicare and Medicaid Services, 2012). According to the Agency for Healthcare Research and Quality (2010), and the Centers for Disease Control and Prevention (2010), the annual costs to American taxpayers to treat preventable chronic diseases of heart attacks, stroke, cancer, diabetes, arthritis, obesity, smoking, and alcohol addiction were over \$2 trillion. In addition, 5% of 4.7 million older adults age 65 and older (Administration for Community Living, 2014) are suffering from dementia that costs American taxpayers more than \$215 billion annually. Dementias are predicted to increase to 14% by 2050 at a cost of \$511 billion annually (Centers for Disease Control and Prevention, 2014).

### **Applied Gerontology**

The word “applied” means field research in any academic and professional discipline. Applied gerontology is the study of the aging processes. This academic and professional field

emerged when professional societies and peer-reviewed journals began post Second World War (Birren, 2002). These social and behavioral researchers started investigating physical aging on a micro-level (individual) and public policy on a macro-level (society). For example, a micro-level inquiry focused on a lifestyle of recommended nutrition and vigorous exercise through the aging process, whereas a macro-level inquiry focused on the public policy of congregate nutrition, socialization, and exercise at senior centers. Researchers of the mid-20th-century viewed aging as abnormal, on the other hand, researchers of the 21st-century view aging as normal (Wilmoth & Ferraro, 2007). Due to advancements in nutrition and exercise sciences in past decades, applied gerontologists are now focusing their research on healthy aging.

### **Participatory Arts**

This manuscript focuses on healthy older performance musicians (PMs) who participate in the participatory arts in the U.S. Music education is the participatory arts for healthy people of all ages needing mental, physical, and social stimulation and community music venues to perform. College and university students who seek professional music degrees in performance (i.e., vocal, instrumental, composer, and conductor) practice their repertoires every day to develop music competencies in preparation of music rehearsals, which are preparatory for participation in community music concerts (national and international).

Four organizations govern the standards of lifelong learning of music. First, the National Association of Schools of Music (NASM, 2016), founded in 1924, is the U.S. accrediting body of music conservatories, college and university schools of music, postsecondary non-degree-granting schools of music. All categories total 652 schools ([nasm.arts-accredit.org/index.jsp](http://nasm.arts-accredit.org/index.jsp)), and promote lifelong learning, research, and policy. Second, the National Association for Music Educators (NAfME) was founded in 1937 for core music education from kindergarten to twelfth

grades ([www.nafme.org](http://www.nafme.org)). Recently, NAFME implemented the American Community Music Education Special Research Interest Group (ACME SRIG). The Group supports research to understand better the characteristics of older adults who participate in community music ([www.acmesrig.org](http://www.acmesrig.org)). Third, the International Society of Music Education (ISME) was founded in 1953 to establish music education as core curriculum in schools, and to promote lifelong learning, research, and policy. In 1982 as an outreach, ISME founded the Community Music Activity Commission (CMAC) to bring together musicians and non-musicians, who were motivated to learn music, to participate in community music ([www.isme.org/cma](http://www.isme.org/cma)). Fourth, the New Horizons International Music Association (NHIMA) ([www.nhima.org](http://www.nhima.org)) was started by the National Association for Music Merchants (NAMM; [www.nammfoundation.org](http://www.nammfoundation.org)), which Roy Ernst founded in 1991. The NHIMA educates or re-educates adults age 50 and older (currently any age) in music to participate in community music activities (i.e., choirs, orchestras, symphonies, and bands). Despite all these organizations that support music education and participating in community music venues, Americans have not yet insisted on lifelong learning of music and community music participation considering mass media coverage of music on healthy aging ([www.Nature.com](http://www.Nature.com)) and ([www.NationalGeographic.com](http://www.NationalGeographic.com)).

### **Community Music**

Community music is a social entertainment performed by musicians in a venue that is indoors or outdoors and large or small. Community music repertoires (collection of music compositions) reflect community musicians' cultural values, beliefs, and behaviors (Veblen, 2011). Veblen explains that community music in the field of research that refers to musicians, not listeners, which is important in searching for salient studies. Many healthy older adults want an activity that motivates them to participate in their community. In Fargo, North Dakota, there

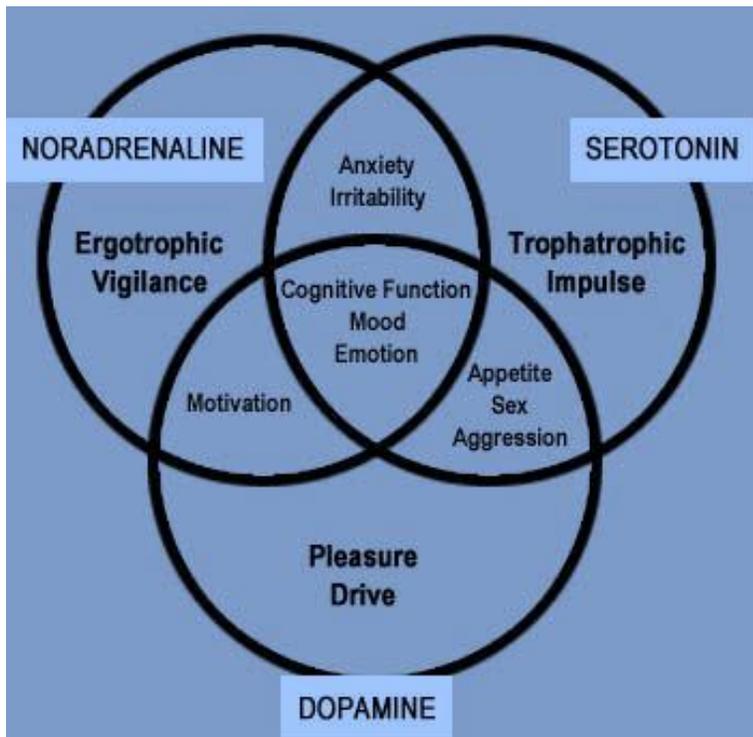
are two NHIMA community music programs of choice, which are choir and brass band; membership eligibility is based on music training at some point in the life course. However, there are independent ensembles that accept members without music training. The value of music to older adults might be viewed by the popular folk song titled *Mr. Tanner* (Chapin, 1973). The song was written by the late Harry Chapin (1942-1981), who declared the importance of music to Martin Tubridy, a professional clothes cleaner of Ohio, and ostensibly the voice of the older population who believe *music is life, not a livelihood* (Chapin, 1973).

Mister Tanner was a cleaner from a town in the Midwest.  
And, of all the cleaning shops around, he'd made his the best.  
But, he also was a baritone who sang while hanging clothes.  
He practiced scales while pressing tails and sang at local shows.  
His friends and neighbors praised the voice that poured out from his throat.  
They said that he should use his gift instead of cleaning coats.  
**But music was his life, it was not his livelihood,**  
And it made him feel so happy and it made him feel so good.  
And he sang from his heart and he sang from his soul.  
He did not know how well he sang; it just made him whole.

## **Treatment Arts**

A background of the treatment arts is included for readers who are unfamiliar with (1) how music promotes healthy aging, and (2) why unhealthy, non-musicians are led into the participatory arts for palliative care. Over the years, technology has improved neuroimaging equipment and techniques; some neurologists have studied the characteristics of music and its influence on mental and physical health following the Second World War. The purpose of neurology is to treat impairments to the central nervous system (i.e., brain, spinal cord, autonomic nervous system, blood vessels). Many neurologists endeavor to ameliorate impaired functions (www.aamc.org) by music research models; hence, the pioneering studies on the effect of music on health (Chanda & Levitin, 2013). In Figure 1.1, the center of the Venn diagram signifies the impact of chemical neurotransmitters (i.e., *dopamine*, *serotonin*, and *noradrenaline*)

that are stimulated naturally by music to affect cognitive functions, mood, emotions, and behaviors. Antidepressant drugs are synthetic neurotransmitters, which block naturally produced neurotransmitters from being released to nerve cells (Lundbeck University, 2014). Therefore, this researcher believes that gerontology specialists who prescribe antidepressant drugs (SSRI, SNRI, and NDRI) to musicians are doing a disservice to their patients. According to neurologists (Chandra & Levitin, 2013; Herholz & Zatorre, 2012; Lundbeck University, 2014), multiple areas of the brain release neurotransmitters that all work together. Today's functional Magnetic Resonance Imaging (fMRI) technology illuminates multiple brain regions when an individual participates in music, whereas slight illuminations from individuals in therapeutic arts who listen to music. According to current science, then, music is a catalyst for stimulating brain activity, which safeguards wellness, happiness, and quality of life.



*Figure 1.1.* Co-transmission of Chemical Neurotransmitters  
Source: Lundbeck University (2014). (Used by permission)

Music therapy is a classification of the treatment arts, which focuses on people needing interventions for chronic diseases and dementias ([www.musictherapy.org](http://www.musictherapy.org)). Many gerontology specialists of the treatment arts collaborate to develop interventions to reduce patients' pain, anxiety, clinical depression, and health care costs. The practice of music therapy has existed since Antiquity (i.e., Samuel 16:14-23). However, after the First World War, music therapy regained attention when doctors observed the quick recovery rates among war veterans who listened and played music than veterans who were not engaged in music. Since 1953, the American Music Therapy Association (AMTA) has grown in popularity as an alternative or supplemental intervention to the medical model in the treatment of cognitive, physical, and psychological disorders ([www.musictherapy.org](http://www.musictherapy.org)).

Ambient music is credited to George Owen Squier (1865-1934) for arranging music compositions for passive listening to change human behaviors. However, through technology, ambient music is credited to the Muzak Corporation in 1922 (Bonds, 2006) as passive listening music to the public in most environments. Thus, if music therapy is palliative treatment for illnesses, then music should be a catalyst for healthy aging and quality of life.

### **Abbreviations, Terms, and Definitions**

**Activity theory:** suggests that successful aging involves three elements: (1) high mental and physical functioning, (2) actively engaging with others, and (3) avoiding disease and disability (Rowe & Kahn, 1987, 1997, 1999).

**Ambient music:** is background music to shape actions and attitudes (Bonds, 2006).

**Baby Boomer:** is a demographic term for a generation born from 1945 to 1960. Literary references to this generation lack any consensus of upper or lower case spelling and words,

which are used interchangeably. (i.e., Baby Boomer, Boomer, baby boomer, boomer, Baby boomer). This manuscript adheres to upper and lower case identifiers.

**Community music:** is music performed in a public venue both indoors/outdoors and large/small (Bonds, 2006).

**Continuity theory:** suggests that as people reach midlife and later life, adaptations to the normal aging processes are necessary to avoid physical and mental disease (Atchley, 1971).

**Creative arts:** refers to writing, music, dance, and visual arts activities that are taught to community residents who are cognitively, and physically impaired.

**Hierarchy of human needs theory:** suggests that the four lower levels of basic physiological needs must be met before people pursue the four higher levels of human development (Maslow, 1943a; 1943b; 1954; 1971).

**Homophony:** is a melodic line accompanied by subordinate voices (Bonds, 2006).

**Music therapy:** is music that is performed to patients as an alternative or supplemental intervention (palliative care) in the treatment of cognitive, physical, and psychological disorders ([www.musictherapy.org/](http://www.musictherapy.org/)).

**Music:** is *sound tones* (pitch) that are organized by letters A, B, C, D, E, F, and G, that are sequenced by *pitch class* in ascending and descending order by major and minor key *scales*, classified by *timbre*, *rhythm* (a pulsed sound pattern) and *meter* (a recurring strong and weak pulsed sound pattern) to affect emotions. Music as a whole comprises theory and harmony in music compositions comprising symbols, numbers, and Italian instructions for singing and playing instruments in performance (Benward & Saker, 2003; pp. xii–25).

**NMs:** are unhealthy non-musicians.

**Participatory arts:** Music education has been the foundation of the participatory arts since 1924 with the founding of the National Association of Schools of Music (NASM). In 1937, the National Association for Music Educators (NAfME) was founded for establishing and implementing standards for licensing U.S. music educators. In 1953, the International Society of Music Education (ISME) was founded and established music education as core curriculum in U.S. schools, and promotes lifelong learning, research, and policy. In 1978, NAfME implemented the American Community Music Education Special Research Interest Group (ACME SRIG) to encourage U.S. research on older adults and encourage their community music participation. In 1982, ISME founded the Community Music Activity Commission (CMAC) to bring together U.S. musicians and non-musicians (to learn music) to participate in community music. In 1991, the New Horizons International Music Association (NHIMA) was founded for older adults (non-musicians and musicians). These organizations ensure participatory arts are foundational to United States communities for healthy people of all ages needing intellectual, physical, and social stimulation to participate in community music ensembles and regularly perform in community venues.

**Phenomenology:** is a research approach to a phenomenon that is explained by participants' life-world experiences; researchers analyze commonalities among participants' narratives to determine how their life experiences relate to the phenomenon (Hays & Singh, 2012).

**PMs:** are healthy performance musicians (i.e., vocalists, instrumentals, composers, and conductors). This study focuses on healthy older performance musicians (PMs) who regularly participate in community music (i.e., Participatory Arts).

**Sacred music:** is the combination of religious liturgical words and song.

**Secular music:** are non-religious lyrics; monophonic song accompanied by instrument(s).

**Treatment arts:** is an arts approach that gerontology specialists use to slow down chronic diseases and dementias among older adults to improve their quality of life. Treatment arts are also called by other terms depending on gerontology specialists' field of study such as healing arts, alternative therapy, and complementary therapy, but with the same therapeutic goals.

**Wellness:** in this study focuses on four dimensions of human development: emotional, intellectual, physical, and social.

### **Problem Statement**

Though the participatory arts belong to healthy musicians of all ages, an extremely small amount of research literature is written about them. Likewise, qualitative literature is scarce on phenomenological approaches that are exploratory in nature of PMs' community music participation, wellness (i.e., physiological, intellectual, emotional, and sociological dimensions), happiness, and quality of life. In relation to PMs' investment in learning music through the life course, few applied gerontologists explored music and healthy aging. This is fundamental to wellness, happiness, quality of life, and longevity.

### **Purpose Statement and Research Questions**

The purpose of this study was to identify the role of music among PMs age 50 and older because there is a dearth of research on PMs in the participatory arts literature. Instead, most participatory arts literature now contains older non-musicians (NMs) with none to rudimentary knowledge of music and seemingly are unhealthy that gerontology specialists solicited from treatment arts and creative arts to the participatory arts to 'participate' alongside PMs; however, PMs are excluded in research study results and findings. Therefore, where there is no literature on PMs, literature on NMs is offered and prefaced with health differences between PMs (healthy) and NMs (unhealthy) in section summaries to avert reader confusion. The overarching

aim, then, is to identify the role of music among PMs who have earned professional performance music degrees from NASM accredited Schools of Music colleges and universities. In addition, PMs who have years of private tutoring, or are self-directed learners are also included in this study, but all PMs achieved music competencies on levels of advanced, expert, and virtuoso levels. In all, the review of literature sought to identify research about healthy PMs who regularly participate in community music by (1) singing, (2) playing instruments, and (3) composing music.

Because qualitative literature is lacking, a base of knowledge on the role of music among PMs, and a gap in the qualitative literature of the human development dimensions of PMs, research questions were created to ensure the study did not venture off from the research design, plan, and approach to data collection, analysis, and interpretations. The research questions were:

1. What is the role of music among healthy older performance musicians?
2. What motivates healthy older performance musicians to sing, play an instrument, or compose music over the life course?
3. Is music life versus a livelihood to healthy older performance musicians?
4. Does participation in community music contribute to wellness?
5. Does participation in community music contribute to happiness?
6. Does participation in community music contribute to stronger relationships, and socialization?

### **Organization of Disquisition**

The organization of this dissertation is by chapters. *Chapter One* pertains to the Introduction including the problem and purpose statements and research questions. *Chapter Two* contains a Review of Literature including selected theories of aging, selected motivation

theories, an abbreviated history of music, and community music in the arts and sciences.

*Chapter Three* pertains to the Methods and Procedures, which describes how the research was conducted, including approval of the Institutional Review Board. *Chapters Four, Five, and Six* consist of three manuscripts that present the findings of the study. Finally, *Chapter Seven* is a Summary of the overall study, conclusions drawn, limitations of the study, and recommendations for further research.

## CHAPTER II. REVIEW OF LITERATURE

The focus of this review of literature is on healthy older expert performance musicians (PMs) who earned professional music degrees or received private tutoring, or were self-taught in the United States (U.S.). These older musicians pursue community music directors of choirs, symphonies, orchestras, and bands who offer (1) repertoires that showcase their music competencies (i.e., advanced, expert, virtuoso) of singing, playing instruments, and composing, (2) opportunities to perform as soloists, in small or large ensembles, (3) traveling to perform on the local, national, and international level, (4) performing face-to-face, and (5) developing relationships that are rooted in community music participation. These musicians are mentally and physically healthy, otherwise, they could not have been capable of participating in community music for more than 60 years, which is a testament to music education advocacy over the past 91 years. However, the role of music in the lives of PMs has not been a topic of interest to date by either the music community or the medical community.

Approximately 450 gerontology titles were reviewed on music, relationships, health, wellness, and happiness in the participatory arts for this dissertation; however, only about 100 studies were analyzed. These studies were the closest to identifying independent living older adults and their involvement in music. The following terms were the principle focus of this review. First, PMs' music participation to sing, play instruments, and compose music; second, PMs' continuing health and wellness, adapting to aging health and resultant personal benefits from music participation; and third, PMs' happiness resultant to lifelong learning of music, and music relationships, and socialization. PubMed, CINAHL, ProQuest, Science, Sage, Science Direct, SpringerLink, PsycINFO, JSTOR, and Google Scholar databases were searched using the

key words observatory arts (dance, theater), and treatment arts (psychiatry, psychology, music therapy), which were then eliminated.

The primary focus was the relevant science from participatory arts research on music related to wellness, happiness, and aging from 1946 to 2016. The articles included in this review were original research, theory based research, literature reviews, and quantitative, qualitative, and mixed methods research approaches to data collection. Word search strings (specific to each database) consisted of older adults and music along with one of the following words: activity, age cohorts, aging, behaviors, beliefs, benefits, civic engagement, cognition, community engagement, composing, continuity, culture, education, emotions, exercise, gender, generativity, healthy aging, identity, life satisfaction, listening, meaning, memory, motivation, nutrition, participatory arts, personality, physical attributes, playing instruments, quality of life, relationships, singing, social classes, socialization, society, songwriting, successful aging, training, values, well-being, and wellness.

Although literature is categorized as participatory arts where healthy musicians are logically found, it is now muddled by geriatric specialists' research on unhealthy NMs to ameliorate their chronic diseases and dementia – topics that are typically published in the treatment arts or aging literature. That said, this researcher could not find scholarly literature that answers the question of what the role of music is among PMs. Instead, unhealthy NMs are described in literature as recreationalists (Gates, 1991), dabblers, amateurs, hobbyists, and volunteers (Stebbins, 1992) ostensibly because chronic illnesses impeded the ability to learn quickly and sustain participation in community music.

## **Population Aging**

The United States' population has increased substantially in 100 years, primarily to decreases in infant and child mortality and increases in immigration (Population Reference Bureau, 2002). Population Reference Bureau reported the U.S. population in 1900 was about 76 million people, of which 3 million (4%) were age 65 and older; a smaller percent of the older population was the norm then. By 2000, the population increased to 282 million people, of which 35 million (13%) were age 65 and older. Although life expectancy was, on average 47 years in 1900, life expectancy had increased to 68 years in 1960, and about 80 years in 2000 (Population Reference Bureau, 2013). The problem of child mortality that was prevalent 100 years ago is not the problems of today. Rather, adults are living more than 30 to 40 years longer than their ancestors did, and their health care demands burden the whole of U.S. society.

There are a few paradigms to explain the ten-fold increases in population and life expectancy rates for the past 100 years: (1) decreases in death, and (2) increases in immigration. Moreover, the GI generation (1901-1924) and Silent generation (1925-1944) were first to live beyond age 47 as whole generations, not the 4% or 5% fractions as in previous generations (Strauss & Howe, 1991). In addition, the Baby Boom generation (1946-1964) was the largest of the three generations, which further increased the older population size. Accordingly, like the GI generation, the Boom generation will probably continue to transform American beliefs and values because it is the most educated of the three generations. Yet, there is little literature on PMs participating in community music. For that reason, today's researchers do not have wellness and longevity data from the GI and Silent generations to compare with the Boom generation and their descendants.

As the Boom generation enters into retirement activities for self-fulfillment, it is plausible that participation in musical activities will play a much larger role in healthy aging (Colucci, 2014; Kim, Fridgeon, & Kim, 2014; Schwadel, 2011). The Boom generation, more than any other, received formal education in music; therefore, music is an integral part of their daily lives. Osterbur (2014) surveyed 1,078 Boomers in 2011, and nearly 90% of Boomers reported they were motivated to eat properly, exercise, and participate in mental games for cognitive health. Furthermore, Boomers reported old age to them was age 80. It follows, then, proactive health maintenance and academic achievements will mean more time for leisure activities such as music for at least another 20 years (Osterbur, 2014).

In the Boomer's youth, there were public and private schools that offered music programs from kindergarten to twelfth grades. However, many public and private schools did not offer music programs, and many parents were unable to afford private music lessons. Since 2011, the Baby Boomer generation entered retirement; each day until 2030 10,000 Boomers retire or achieve retirement age ([www.AARP.org](http://www.AARP.org)). It is understandable that retirees have personal time to learn music and participate in community music than non-retirees.

Since 1991, NHIMA has brought together music educators with adults age 50 and older to learn music, regardless of musical training experience, to develop musically and to participate in community music ensembles. McQueen, Hallam, Creech, and Varvarigou (2013) explain many Boomers will probably turn to music activities upon learning of the relationship between musical training and healthy aging because Boomers are very responsive to health promotion activities. However, Hartley (2006) reported music directors and music educators are not prepared to implement NHIMA programs in most towns and cities for the needs of a vast number of adults age 50 and older. There simply are insufficient licensed music educators to

accommodate the Boomer generation. The problem is two-fold: licensed music educators have lobbied government for music education to children from kindergarten to twelfth grades since 1937, but they have not lobbied government for music education to older adults despite the founding of NHIMA in 1991. The most expedient remedy, aside from coordinating an awareness campaign through OAA, NCCA, NASM, ISME, NAFME, and NHIMA, is for city planners, applied gerontologists (degreed musicians), and music directors to survey their towns and cities. Specifically, they need to determine (1) the number of Boomers who want to learn music, (2) the number of Boomers who are motivated to participate in community music, (3) their music competencies upon entry, and (4) their preferred repertoires. After analyzing the data, city planners and music directors should implement NHIMA's music ensembles using the NHIMA's Music for Life™ toolkit (\$30.00) ([newhorizonsmusic.org/planning/](http://newhorizonsmusic.org/planning/)). See Appendix A for OAA statutes to coordinate funding through community planners (liaisons) and NHIMA.

### **Applied Gerontologists**

By the 1980s, a small number of applied gerontologists began to explore dimensions of wellness and music with aging men and women (Atchley, 1971, 1989) by a qualitative approach that surprisingly did not gain interest in the research community for decades. Therefore, it is unknown to this researcher how many elite PMs there are in the U.S. In addition, few applied gerontologists have investigated the reasons healthy older non-musicians were motivated to learn European Western Classical music and other styles in midlife and later life. Specifically, acquiring the knowledge and experience to sing, play an instrument, and compose music, and develop music competencies are a very ambitious undertaking at midlife (and older) at a stage most people think of retirement or are fully into retirement. Nevertheless, PMs rarely appear in research literature as either participants or collaborative researchers, but their narratives are

pertinent to understand better the relationship of music to continued healthful aging (Cohen, Perlstein, Chapline, Kelly, Firth & Simmens, 2006, 2007; DeVries, 2012; Hanna-Pladdy & Gajewski, 2012; Holmes & Holmes, 2013; Solé, Mercadal-Brotons & Gallego, 2010).

Of the small number of qualitative studies, themes of community music and healthy aging topics appeared in the scholarly literature. Researchers discovered that music (1) builds enduring relationships (Carr, 2009), (2) increases active socialization (Croom, 2015), (3) increases longevity (Zharinov & Anisimov, 2014), and (4) offers life satisfaction through community music participation (Solé, Mercadal-Brotons, Gallego, & Riera, 2010). Primarily, applied gerontologists identified relationships, socialization, longevity, and life satisfaction in participatory music as foremost reasons for lifelong learning and making of music.

To date, there is no applied music gerontology discipline, but if there were, PMs (i.e., vocalists, instrumentalists, composers, and conductors) would have been studied for decades. Therefore, time is of the essence to form an applied music gerontology discipline that governs its leadership and membership of degreed musicians from NASM accredited Schools of Music for scientific inquiry. It is reasonable and logical for said researchers to pioneer the role of music in scientific inquiry of PMs because musicians are the rightful authority of music. When the discipline is formed, a base of knowledge can be relied upon.

### **Gerontology Specialists**

By the end of the Second World War, medical practitioners specializing in geriatrics (chronic diseases and dementias), and later known as gerontology specialists, quantitatively measured the effects of listening to music on older adults living in long-term nursing facilities (Beavers, 1969; Gilbert & Beal, 1982). Some of the music on aging phenomena they explored were (1) perceived emotions, (2) physical health, (3) cognitive health, (4) spiritual health, and

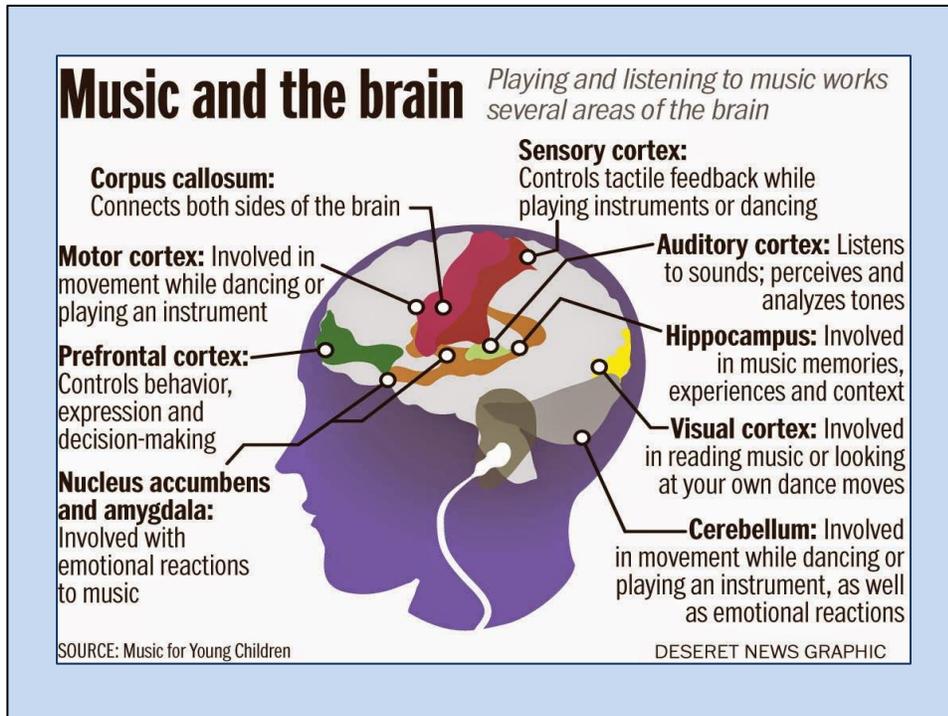
(5) social health (Abdellah, 1988; Goddaer & Abraham, 1994; Karras, 1987; Schweinsberg, 1981; Spitzer & Coutinho, 2014).

### **Neuroscience**

This researcher has chosen neuropsychology to explain behavior, whereas, neuroanatomy and neurochemistry to explain the effect of music on health and its correlation on the functional, connective, and developed regions of the brain. Neuroanatomists and neurochemists investigate the primary brain lobes of the central nervous system that control physical and emotional functions in the cerebrum, cerebellum, and brain stem (i.e., hindbrain, midbrain, forebrain, and neural pathways). The brain structures and functions are the (1) *nucleus accumbens* which are located in each hemisphere (above the ear) that involves cognitive processing of motivation, pleasure, reward and reinforcement learning; (2) *prefrontal cortex* is the cerebral cortex that covers the frontal lobe, which involves personality, cognitive and social behavior, and decision making; (3) *motor cortex* is in the cerebral cortex (i.e., premotor cortex, primary motor cortex, and somatosensory cortex) located at the junction of the frontal lobe and parietal lobe; the motor cortex involves the planning, controlling, and execution of voluntary motor movements; (4) *corpus callosum* is the white matter that joins the left and right hemispheres together for the hemispheres to communicate; (5) *sensory cortex* (i.e., somatosensory cortex) is located at the top of the head from ear to ear (i.e., includes cortices of vision, audio, and olfactory), which involves sensation, stimuli, and movement; (6) *auditory cortex* is located in both temporal lobes (above ears), which involves hearing speech (left ear) and music/sound (right ear), and storing long-term memory (both lobes); (7) *hippocampus* is part of the limbic system (forebrain – both hemispheres) and involves short- and long-term memory; (8) *visual cortex* (in occipital lobe at the back of head in both hemispheres) involves processing visual information; and

(9) *cerebellum* (at the back of head in both hemispheres) involves motor control, regulating human emotions, and coordination. The cerebellum receives input from the spinal cord, sensory stems, and other brain structures ([thebrain.mcgill.ca/avance.php](http://thebrain.mcgill.ca/avance.php)).

The first successful neuroimaging of the brain was in 1977 ([www. Two-Views.com](http://www.Two-Views.com)). Since then, neuropsychologists and psychiatrists interpreted the neuroimagery as neural activity. These scientists have wanted to understand better, how music stimulated nearly every known cognitive function, simultaneously, to ameliorate chronic diseases, dementias, and problem behaviors. However, since the recent formation of neuroanatomy and neurochemistry disciplines, scientists report that neuroimagery is not illustrating neuron activity, rather, blood flow. They say that when music stimulates the brain, the brain arteries fill up with oxygenated blood, which then stimulates the release of naturally produced chemical neurotransmitters (i.e., dopamine, serotonin, and noradrenaline) that release into the central nervous system. This is seen in Figure 2.1.



*Figure 2.1. Music and the Brain*  
Source: Deseret News (2014). (Used by permission)

Researchers have investigated the influence of various music genres on the brain. Neuropsychologists Koelsch and Skouras (2014) conducted an experiment to investigate the causes of (a) joy (instrumental music genres), (b) fear (film and video soundtracks of suspense), and (c) neutral (neither joy nor fear) within four-minute time frames (4 seconds each) in participant ages from 21 to 38 years ( $M = 25.55$ ,  $SD = 4.80$ ). Koelsch and Skouras (2014) reported that the amygdala (temporal lobes), striatum (forebrain), and hypothalamus (forebrain) reacted to the music of joy, but cortical and baso medial nuclei (amygdala) played a chief role in modulating emotion. Koelsch and Skouras (2014) used both fMRI and Eigenvector Centrality Mapping (ECM) to measure stimuli evoked by music. Data confirms the nexus among the amygdala, striatum, hypothalamus, and the neural pathways that stimulate dopamine and the emotions of joy. In related psychology, bioengineering and anesthesiology, and psychiatry

studies (Mitterschiffthaler, Fu, Dalton, Andrew, & Williams, 2007; Chandra & Levitin, 2013; Chudler, 2014), dopamine, serotonin, and noradrenaline natural chemical neurotransmitters regulated 'feel good' emotions. Limitations of the study were the use of (1) film and video to evoke fear, and (2) ECM technology to measure emotions from weak to strong (Quinto, Thompson, & Taylor, 2014). Moreover, to evoke fear, music compositions must contain diminished and augmented tones (tritones); and to evoke sadness, music compositions must contain either major key scales with tempo changes and/or modulating minor key scales.

White-Schwoch, Carr, Anderson, Strait, and Kraus (2013) investigated whether musical training from one to three years and from age four to fourteen years in early childhood maintains the neural timing affects to cognition, auditory, and speech despite 40 to 59 years lapse in music participation. Researchers reported that individuals who had from one to three years of musical training in childhood had the greatest benefits of neural timing whereas individuals who had from four to fourteen years had fewer benefits. However, both groups had better neural timing than individuals who did not receive any musical training in childhood (Kraus et al., 2014; Skoe & Kraus, 2012; White-Schwoch et al., 2013; Wong, et al., 2007). Zatorre, Chen, and Penhune (2007) explain that because music is cognitively challenging, older adults would benefit by music education.

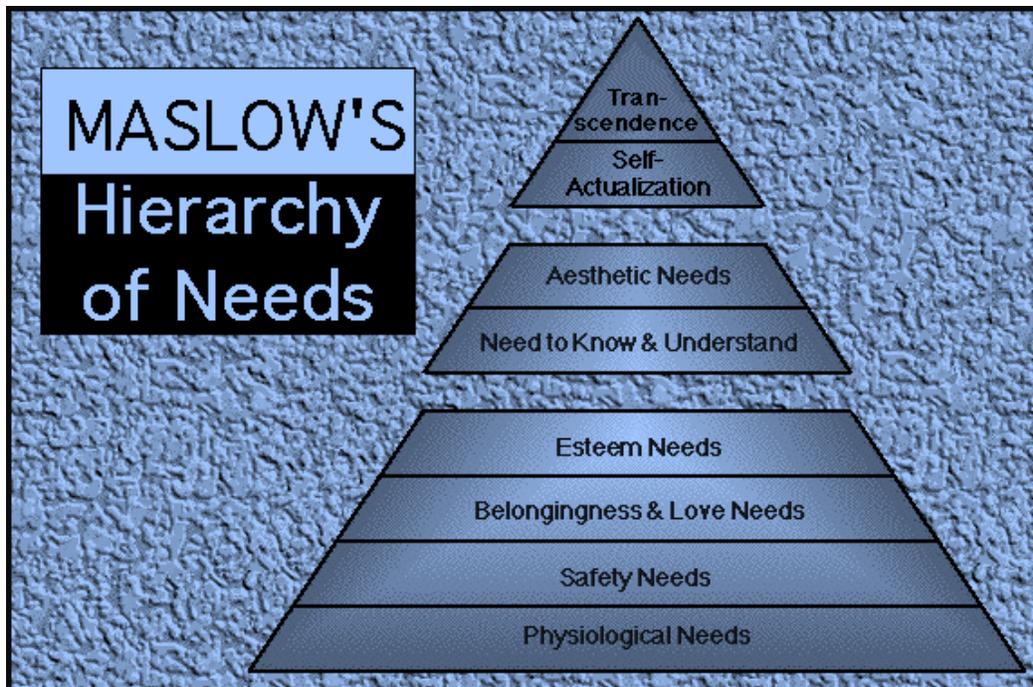
### **Theories of Aging**

Psychologists and sociologists believe the motivation to learn begins with an individual's goal-oriented desire, which prompts his or her behavior in a given direction, and then continues until the desire is satisfied (Huitt, 2011). In the past 100 years, many researchers have utilized the motivation theory in many fields of research (Huitt, 2011). Huitt and Hummel (1997) report there are several psychology categories in use through the motivation theory, such as

behaviorism, cognitive development, humanism, social learning, achievement, attribution, flow, intrinsic, and self-determination. However, the psychosocial theories of activity and continuity as well as Maslow's (1943a, 1943b; 1954) humanism of motivation theory on human needs (i.e., biological, psychological, and sociological), were a good fit to guide this research study.

### **Motivation of Human Needs**

Maslow (1943, 1971; 1998) developed a hierarchical model in the shape of a pyramid that ranks human needs from low to high. Maslow believed humans were motivated to fulfill their basic biological and physiological needs before higher ordered needs (see Figure 2.2). Maslow said, "...what happens to man's desires when there is plenty of bread and when his belly is chronically filled? At once other (and 'higher') needs emerge and these, rather than physiological hunger, dominate the organism. Moreover, when these in turn are satisfied, again new (and still 'higher') needs emerge and so on" (Maslow, 1943a, p. 375). Maslow (1943; Huitt, 2011) suggested that if fundamental human needs are not met, the individual has deficiency needs. However, if human needs are met, then growth needs motivate individuals to higher levels of human development and acquisition. Addressing the topic of the arts, Maslow (1943) said, "A musician must make music, an artist must paint, a poet must write if he is to be ultimately happy. What a man can be, he must be. This need we may call self-actualization" (p. 382). Logically, assuming older adults have met their human needs, and have achieved the growth needs of self-actualization and transcendence, then older adults are probably healthier, happier, and more satisfied in living than if they had not participated in music.



*Figure 2.2.* Maslow's Hierarchy of Human Needs Model – Motivation Theory  
Source: Huitt, W. (2011). (Used by permission).

### **Continuity Theory**

According to Atchley (1971, 1989), making adaptations in middle and later life define the normal aging process in human development (i.e., lack of physical and mental disease).

Continuity links a person's history either internally or externally (Atchley, 1989). On the one hand, internal elements are constant throughout the life course of competence, ego identity, self-esteem, and temperament (Atchley, 1989). On the other hand, external elements offer maintenance of continuity of relationships, social support, self-concept, coping, and personal goals (Atchley, 1989). The continuity theory suggests that older adults will maintain lifestyle activities, and relationships adopted in younger years by formulating strategies that maintain physical and mental health (Atchley, 1989). For example, an older singer would continue to maintain health to perform music and thereby maintain competence, ego identity, self-esteem, and temperament. However, as the body ages, an older adult would employ adaptive strategies of

relationships, social support, self-concept, coping, and personal goals to support the normal aging process (Atchley, 1989).

### **Activity Theory**

According to Rowe & Kahn (1987; 1997; 1998; 2015), successful aging involves three elements: (1) high mental and physical functioning, (2) actively engaging with others (i.e., exchanging information and providing support), and (3) avoiding disease and disability. For example, higher education is the strongest predictor for maintaining high cognitive functioning. Another example is strenuous exercise (brisk walking), which is a predictor for maintaining high physical performance. Finally, emotional support from close family and friends is a predictor for maintaining activity (Rowe & Kahn, 1997). To apply this theory, when older adults pursue lifelong learning of music, they are challenging their neural processes of information by increasing processing speed and memory and thereby maintaining healthy cognition. So, too, singing, and playing instruments are physically demanding insomuch that physical functioning is imperative (Rowe & Kahn, 1997, p. 436). Likewise, actively engaging with others in music composition or music accompaniment supports the development of others (Rowe & Kahn, 1997, pp. 433-434). Therefore, to avoid disease, disability, and premature death means people must participate actively in life to successfully age, which includes participation in music activities. To understand better why people participate in music as they age, and for the benefit of millions of young adults developing in midlife years, as well as to help build a base of knowledge and fill the gap in the literature, the topic of interest is the role of music among healthy older performance musicians.

## **Musical Arts**

Music is an art and science that mirror the soul of both the individual and society. Music is an amalgamation of linear mathematics, geometry, physics, languages, cultures, societies, and 2,600 years of history to name just a few of its parts. From Antiquity to the 21st-century, music is essential to everyday living for most people. However, information on the 2,600 years of music history is an undertaking beyond the scope of this dissertation because of the aforementioned characteristics. Yet, it is important to mention that music education is required to develop music competencies (i.e., beginner, intermediate, advanced, expert, and virtuoso) for performing European Western Classical music, which is cognitively stimulating to motivate lifelong learning of music and community music participation in any of the styles and genres.

### **Community Music in the Arts**

Community music participation is age old. Since 1924 and 1937, music educators and advocates have diligently planned, designed, and implemented music education in schools and communities for all ages. PMs who chose healthy lifestyles through the life course, enjoy community music ensembles to maintain physical skills (Saarikallio & Erkkila, 2007), fine motor skills (Bruhn & Schroter, 2009), and increased brain grey matter, which has long-term effects on other brain structures and functions that NMs do not experience (Gaser & Schlaug, 2003). Therefore, applied gerontologists should explore PMs who participate in community music ensembles for answers to healthy aging, and leave gerontology specialists to explore NM patients (Eckl, 2012).

### **Community Music in the Sciences**

In recent decades, gerontology specialists have nearly upended music educators' efforts of community music programs for healthy musicians. Eckl (2012) delineates the inherent

problems of inclusivity of NMs (i.e., physical and mental declines) in PMs' community music programs. NMs are solicited by the gerontology specialists to 'participate' alongside of PMs who are serious about their participation in community music. In 2001, the federal agency National Center for Creative Aging (NCCA), sanctioned gerontology specialists to lead its NM patients into community music ensembles to 'participate' in both the participatory arts and treatment arts to decrease health care costs.

Music therapists are the reasonable and logical specialists to form a music organization dedicated to NM patients that gerontology specialists can conduct their research agendas. In fact, music therapists who possess NASM accredited degrees and certifications are qualified to create community music programs that meet the needs of NM patients. On the one hand, they could use the existing two-tier community music programs founded in England and Australia:

(1) medically necessary, and (2) medically encouraged. On the other hand, music therapists can create a national music organization under the OAA statutes (see Appendix A) that includes adult day-care music programs that music therapists already deliver to older adults. An example to follow is the U.S. Olympics Foundation, which created the Paralympics program ([www.teamusa.org/us-paralympics](http://www.teamusa.org/us-paralympics)). The Paralympics program requires specific personnel, support systems, and environment, which precisely meets the needs of gerontology specialists' NM patients. Non-inclusive community music programs would end the recurring cycle of NM patients who are struggling to compete with PMs, and thereby dropping out of community music activities for lack of music education, and mental and physical health. That said, music therapists should establish a national music organization that incorporates into its patient protocols music that will slow down progressive dementias with the understanding that dementia is not reversible according to the Fisher Center for Alzheimer's Research Foundation

([www.alzinfo.org/articles/senile-dementia/](http://www.alzinfo.org/articles/senile-dementia/)). In this way, patients can enjoy some quality of life in their end days. For example, multi-Grammy Award winner Glen Campbell receives music therapy for his condition of Alzheimer's disease and is happy and cheerful as millions of other patients who benefit from music therapy.

### **Community Musicians**

In past decades, researchers did not delineate their research participants' music competencies. Unless a reader is a musician, it might be difficult to determine whether participants were NMs or PMs. Therefore, to avert confusion, the following studies did not contain expert and virtuoso musicians, rather, participants were beginner, intermediate, and possibly advanced musicians.

Stebbins (1992) explained that dictionaries defy the meaning of both amateur and professional musicians. This researcher acknowledges that researchers in the 21<sup>st</sup> century still do not define healthy musicians by NASM and NAFME standards of the early 20<sup>th</sup> and 21<sup>st</sup> centuries. Instead of the outdated 19<sup>th</sup> century definitions of musicians as amateur (non-paid) and professional (paid), musicians should be identified by their music competency levels: beginner, intermediate, advanced, expert, or virtuoso, but not because of remuneration. For example, an expert musician can perform original music compositions flawlessly. However, a virtuoso musician has mastery of music theory insomuch as to alter impromptu an original music composition by (1) modulating intervals of major and minor key scales, and (2) combining multiple genres simultaneously with key scales without loss of musicianship techniques within a single composition.

Stebbins (1992) believed "professional" and "amateur" musicians shared the same music competencies and motivations, and compared them using his Professional-Amateur-Public (PAP)

model. The model revealed the differences between professionals and amateurs by five characteristics: (1) confidence, (2) self-concept, (3) perseverance, (4) commitment, and (5) preparedness, which determined the audience they chose to entertain. These features were different both quantitatively and qualitatively by musicians' music identity, which corresponded to their motivations to practice and participate in community music. The PAP model identified hobbyists as motivated to play music for themselves or others, but not in community music; and volunteers were motivated for themselves or volunteerism (alms). Stebbins labeled leisure musicians as dabblers because they did not remain in music ensembles for any length of time. In addition, Gates' (1991) study identified recreationalists as a bit more motivated to learn music than dabblers are. Perhaps the real reason older individuals joined community music programs were due to gerontology specialists' encouragement to 'participate' in music to slow down chronic diseases and dementias, which might explain the recurring cycle of dropouts.

On the other hand, Coffman (2002) defined amateur older musicians as quick learners, who are devoted lifelong musicians adapting to the normal aging processes, and bringing delightful music to listening audiences. Yet, he writes in a later study (Coffman, 2008) that amateur musicians are better described as university students because they aspire to professionalism. Coffman's definitions do not define the musicians that are absent in literature.

This researcher believes the contrary is true; the role of music among PMs that she is addressing that do not appear in scholarly literature are the musicians who have (1) professional music degrees from NASM accredited Schools of Music, or (2) years of private tutoring, or (3) self-directed learners. Overall, these musicians developed their music competencies to either expert or virtuoso levels, (4) have participated in one or more different community music

ensembles from 40 to 60 years or more, and (5) whose values are that ‘music is their life, not a livelihood’ (Chapin, 1973).

### **Singing for Community Music**

Singing is anatomical: the brain thinks, and the body responds, any time and any place providing the vocal instrument has not been deformed by lifestyle behaviors (i.e., excessive spicy foods, alcohol, smoking, screaming, etc.). Singing begins with an exhalation of human vocal sounds (phonation) (NIDCD, 2015). At the point of phonation, two smooth adjacent muscle tissues in the thorax come into contact and vibrate to create resonating sound waves from the throat, mouth, and nose (NIDCD, 2015). As any vocal performer will confirm, singing is athletic, and to sing competently, older adults need to be physically fit to meet the challenges of creating beautiful sounds. Being physically fit means having good physical hearing (or amplified by hearing devices). Physical fitness requires proper nutrition, hydration, sleep, and participating in vigorous aerobic exercise to continue good health for the physical exertion required for breathing and singing melodic phrases without altering the original music composition for respiration (Sundberg, 1993).

Most singers of all ages learn respiration (inhalation), phonation (exhalation), and recovery of breath within the first or second professional coaching lesson. Vocal exercises and management of breath are requisite to maintain a precise center-of-the-note pitch (Miller, 1996). Further, in protecting the health of the speaking and singing voice, singers learn how to manage their breath by adjusting their sternum and rib cage. Miller (1996) explains that the management of breath begins by breathing deeply to raise the sternum and rib cage to its fullest and highest position. Then, holding the posture for the duration of a song while inhaling air and exhaling a melody and lyrics, the vocalist creates accurate sounds. The purpose of raising the rib cage is to

manage the inhalation and exhalation of breath from the abdomen and diaphragm to avoid inhibiting air as it passes through the larynx versus manipulating sound using the thorax and tongue, which most unschooled vocalists do. Correct singing from the abdomen and diaphragm prevents damage to the vocal folds; therefore, this goal is important for older adults who want to sing beyond age 65 years. Unfortunately, this knowledge does not appear in the literature after Sundberg (1993), but if it did, it might stimulate scientific inquiry by professional applied music gerontologists.

The vocal instrument is unforgiving of neglect and abuse. Further to singing correctly, singers do not rehearse or perform music when fatigued, stressed, or sick – and *never* sing full volume. All conditions over exert the vocal folds, which can lead to either damage or permanent loss of the speaking and singing voice. Singers, and many other professionals, know to avoid speaking when they experience certain vocal conditions (i.e., hoarse, raspy, inflamed, swollen, pain, itching, excessive mucous) that might cause damage or loss of the voice (NIDCD, 2015). Furthermore, preventing illness, assisting healing, and promoting healthy lifestyle behaviors (i.e., avoiding high-alcoholic beverages, smoking, and consumption of hot spicy foods) are necessary steps to protecting the vocal folds from being burned and deformed (Ferreira et al., 2010; McCann, 2015). Indeed, the importance of singing correctly is not only to create beautiful sounds, but also to nurture the lifelong health of the vocal instrument. Unfortunately, literature on vocal neglect and abuse in community music are *voiceless* on the subject in the participatory arts studies, wellness studies, and aging studies.

Furthermore, there is not much older adults can do about the aging process to the vocal folds, especially individuals who did not know how to care for the vocal folds throughout the course of life. A common problem of aging is an unsteady warbling vibrato that cannot prolong a

note. Instead, the voice sings notes below and above the intended note. When breath management cannot correct the warble, adults drop out of community music voluntarily or music directors may ask them to drop out, which often occurs at about age 65 and older. The reason such adults drop out of singing ensembles is that they recognize the dissonance they create, which is more prominent than the consonance of other vocalists who maintain the original music composition. In cases where individuals dropped out of music ensembles, they had to find alternatives to stimulate the ‘feel good’ emotions (i.e., neurotransmitters) by forming small ensembles for personal enjoyment. Other adults drop out because of motor impairments that prevent them from going up and down the high choral risers, and standing for long periods. Appendix B shows the seating arrangement of choirs that are designed to showcase vocal music competencies. In all, the sopranos and tenors are the first to drop out because of the physical demands to sing the higher range of notes.

Skingley, Martin, and Clift (2015) reported 131 older adults participated in their qualitative three-month singing ‘project’ (see Table 2.1). Most adults (White, female, and retired) reported they joined the ‘project’ for the love of music and singing, but it is unknown why they did not join a music ensemble until researchers solicited them. The authors used the York SF12 health-related quality of life scale, Euroquol EQ-5D health utility scale, and the Hospital Anxiety and Depression scale for data collection. Gates (1991) reported they are recreationalists, whereas Stebbins (1992) reported them as volunteers, amateurs, dabblers, and hobbyists. Nevertheless, on the topic of health and well-being, a female participant age 67 reported, “My health and general outlook and expectations have improved a great deal since participating in this project” (p. 10). On physical benefits of singing, a male age 79 reported, “It has also made me aware of the fact that I do not breathe properly and has, I think, improved the

situation” (p. 11). On psychological benefits of singing, a female, age 64 reported, “The singing sessions definitely had a positive effect on my mood. I felt more cheerful, more focused, and more energetic. When the sessions ended, I felt compelled to join another singing group in order to stave off the withdrawal symptoms and maintain those positive feelings” (pp. 13-14). On the social benefits of singing, a female, age 63 reported, “I have found it beneficial to be part of a group and mixing with others, especially as I live on my own” (p. 14). Skingley, Martin, and Clift (2015) reported singing continued good health for some adults while improving the health of others. Whether participants were as Gates (1991) reported as recreationalists or as Stebbins (1992) reported as volunteers, hobbyists, amateurs, and dabblers or were music therapy patients is unknown. Overall, music was neither participants’ life nor livelihood. The results of these studies suggest the activity theory to explain older adults in community music vocal ensembles.

Table 2.1

*Singing for Community Music*

Author(s) and Year	Design	Participants	Purpose and Key Results/Findings
Skingley, Martin, & Clift (2015).	Mixed methods design: <ul style="list-style-type: none"> <li>• SF12 health and quality of life scale,</li> <li>• Euroquol EQ-5D health utility scale,</li> <li>• Hospital Anxiety and Depression scale for data collection</li> </ul>	<i>N</i> = 131 Ages = >50 years, White, Female	Purpose: to explore health and wellbeing from singing. Results: some adults benefited by inclusion, whereas some did not.
Joseph & Southcott (2014).	Qualitative phenomenology case study design: <ul style="list-style-type: none"> <li>• data analyzed by Interpretative Phenomenological Analysis (IPA)</li> </ul>	<i>n</i> = 5 Ages = 50-75 years	Purpose: to explore lifelong learning and personal benefits of music engagement in choir for leisure Findings: participants valued (1) music engagement, and (2) social connectedness

Social connectedness and socialization are two topics often researched in community music programs. Joseph and Southcott (2014) conducted a phenomenological case study, which was part of a larger arts participation study that began in 2008. The authors reported their standard open-ended questions were to elicit reflective answers on positive aging and choir membership, such as “How did you first find out about the choir? Why did you decide to join? Why have you stayed in this group? Tell me about your musical background. Is this choir your only music engagement? How do you learn a new song? What do you think are the benefits of choir membership?” (p. 5). Although authors recognized the limitations of a small sample size ( $n = 5$ ), they believed their data collection and analysis provided rich narratives to explain the phenomenon. Themes to emerge from their qualitative data were (1) music engagement, and (2) social connectedness. One participant stated the music director offered music classes for one-year but researchers did not report whether there were any other participants in the ensemble prior to the implementation of the research ‘project’ (inclusion of unhealthy non-musicians). Nevertheless, the music director did not allow the choir a choice of repertory preferences, which was problematic for many older vocalists. Joseph and Southcott (2014) reported participants saying,

We’re learning to read music and sing in time, and to sing in key. I couldn’t play what I’m singing on any instrument, but when I look at the music I can nearly sight read, and I know how to count the rhythm” (p. 8); and “...we have some people with walkers, we have people with sticks. We have people with serious difficulties, which do not stop them from singing, but movement of more than a certain amount is a problem (p. 9).

This statement suggests that although the music director consented to the research ‘project’ and its participants, special accommodations for their musicianship entry and physical impairments

were not provided (see Appendix B of choral standing positions on platform risers). Overall, Joseph and Southcott (2014) reported participants joined the choir to sing with others, convenient use of leisure time, shared learning, validation of ‘self,’ and developing interpersonal relationships and well-being that was similar to another study (Sandgren, 2009). Overall, music was neither participants’ life, nor livelihood. The results of these studies suggest the activity theory that explained older musicians’ behavior.

### **Playing Instruments for Community Music**

Similar to vocalists who strive to protect their vocal folds, instrument musicians must also protect their hands from incorrect use or overuse to avert neurological disorders and pain (Guptill, 2012; Kenny & Ackermann, 2015). Similarly, adults who have motor impairments will have difficulty sitting in the traditional seating arrangements for orchestra, symphony, and band ensembles (see Appendix B).

Creech, Hallam, Varvarigou, McQueen, and Gaunt (2013) conducted studies from three different senior centers with 500 older adults to explore the relationship between music activities, other activities, and well-being (see Table 2.2). Participants completed questionnaires on their psychological needs of autonomy and competence before and after community music participation. The authors chose the validated CASP-12 scale by health, aging, and retirement that examined three reasons participants joined (1) positive attitude of singing, (2) convenience, and (3) social connectedness. Of the 500 participants, 398 (80%) participated in music making, whereas 102 (20%) participated in language groups, book groups, yoga groups, and social groups. Self-rated music skills were 29% beginners, 40% intermediate, 28% advanced, 4% expert. Data was analyzed by the Interpretative Phenomenological Analysis (IPA) method. CASP-12 scale compared musicians with non-musicians, which showed statistically significant

differences in control and pleasure but no differences in autonomy and self-realization. The Basic Needs Satisfaction Scale (i.e., control, autonomy, and relatedness) also compared musicians with non-musicians but there were no statistically significant differences on autonomy or competence; however, musicians scored higher on relatedness. Age ranges were from 43 to 93 years; and gender was 81% females and 19% males. Researchers reported music making improved mental health, physical health, and well-being compared to other activities of language, books, yoga, and social groups. Limitations of the study were the amalgamation of outcomes by percentages that did not calculate to 100% and no participant narratives to humanize the data. Nevertheless, the 90% of adults reported they practice their instruments sometimes in preparation for rehearsals, which suggests participants were patients in this study. It also suggests that Stebbins (1992) was correct in that many older adults join music ensembles, but they are not serious about learning music; rather, they are seeking companionship. Therefore, Gates (1991) was accurate in his description that membership categorizes such behaviors as recreationalists as well as Stebbins (1992) descriptions of hobbyists, volunteers, dabblers, and amateurs who are seeking leisure activities of relationships rather than learning music to perform for communities. In other words, music is neither their life nor livelihood. The results of these studies suggest the activity theory as older adults engage in community music.

Table 2.2

*Playing Instruments for Community Music*

Author(s) and Year(s)	Design	Participants	Purpose and Key Results/Findings
Creech, Hallam, Varvarigou, McQueen, & Gaunt (2013)	Survey scales: <ul style="list-style-type: none"> <li>• CASP-12 scale</li> <li>• Basic Needs Satisfaction scale</li> </ul>	N = 500 Ages = 43-93 81% females 19% males	Purpose: to explore whether music making or language groups, book groups, yoga and social clubs supported well-being and quality of life. Results: CASP-12 scale compared musicians with non-musicians, which showed statistically significant differences in control and pleasure but no differences in autonomy and self-realization.
Jutras, P. (2011).	Survey	N = 1,823 Ages = 17-94 years M = 66.5 F = 873 (47.89%) M = (47.78%)	Purpose: to explore potential benefits (i.e., health, personal, skill, and social/cultural) of participation in NHIMA bands. Results: band musicians value community music for social/cultural (82.67%), and personal skill (88.91%) benefits.
Coffman, D. D. (2008).	SF-36v2 Health Survey	N = 120 bands N = 1654 participants Ages = 23-93 54.2% females 45.8% males	Purpose: to explore health and well-being. Results: 30% beginners, 70% trained in childhood; health 98% positive; 74% emotional well-being; 24% physical well-being; 21% cognitive stimulation; 20% socialization. Overall, 62% of adults rated their music competencies at an intermediate level after 2 to 3 years of band membership.
Wagner, I. (2006).	Qualitative interviews	N = 90	Purpose: the social processes of elite musicians' careers Findings: Violin virtuosos practice 8 hours per day; mentored and sponsored into the international workforce by age 18-25.

Contrasting Creech et al.'s (2013) vocal music study, Justras' (2011) community band study consisted of 1,823 individuals age 17 to 93 years ( $M = 66.5$ ,  $Mdn = 67$ ) from 28 U.S. states and Canada (see Table 2.2). Justras worked closely with NHIMA administrators and music conductors by emailing ( $n = 99$ ) band groups resulting in a response rate of 80% ( $n = 79$ ); 17 groups were excluded for various reasons. Justras worked closely with three music education professors to develop a community music questionnaire that ranked 42 benefits from 1 to 10 (1=lowest, 10=highest) in the categories of (1) health, (2) personal, (3) music competencies, and (4) social/cultural benefits. Survey packets were mailed to 62 NHIMA bands of which 57 groups (92%) responded. Although NHIMA educates adults over age 50, some bands permitted members' younger relatives (intergenerational) to participate in their band. Questionnaires reveal the benefits of participation in a band were 38% cultural heritage, 77% personal, 78% health, 83% social/cultural, 89% musicianship skill development, and 99% accomplishment. Justras reports participant questionnaires were calculated using Cronbach's alpha coefficients to measure reliability by response level (from .72 social/cultural benefits to .88 on personal skills benefits). Gender was divided evenly between males (871) and females (873), but researchers did not specify their groupings by musical instruments. Other demographics were 75% college educated, and two-thirds retired (teachers  $n = 351$ ; management  $n = 125$ ; engineering  $n = 106$ , and nursing  $n = 81$ ; 79% were childhood musicians from 2 months to 22 years musical training). Participants self-reported skills as 14% beginner, 62% intermediate, 18% advanced; the average practice time was 3.75 hours per week at home in preparation for weekly rehearsals, which were in preparation of concerts. It is curious that 62% of adults rated their music competencies at an intermediate level after 2 to 3 years of band membership when NHIMA educates beginning musicians to develop instrumental skills within six months to perform in concert. Nevertheless,

94% of the responding band members were over age 50. Again, the limitations of this study are similar to other studies that illustrate that many older individuals join music ensembles because they are either mentally and physically unhealthy (78% reported health) or they are recreationalists and dabblers (Gates, 1991), amateurs, hobbyists, and volunteers (Stebbins, 1992), whereby music is neither their life nor livelihood. The results of these studies suggest the activity theory to explain these older adults' behaviors.

In contrast to Jutras' (2011) NHIMA study, Coffman's (2008) NHIMA study included 1,654 musicians from 28 U.S. states, 2 Canadian provinces, and Dublin, Ireland to determine older adult music experiences and self-reported health. The demographics reported 97.6% Caucasian, 0.8% Asian, and 0.6% African American; 54.2% females and 45.8% males; age ranges from 23 to 93 years (95% over age 50) ( $M = 67.31$ ,  $Mdn = 68$ ,  $SD = 10.96$ ); average health and income; higher education; and musical training in childhood. Unlike Jutras' study of NHIMA band musicians who practiced 3.75 hours per week, Coffman's (2008) NHIMA band members practiced 7 hours per week. The SF-36v2 Health Survey revealed that participants reported NHIMA benefited them by 74% overall well-being, 24% physical well-being, 21% cognitive stimulation, and 20% socialization (see Table 2.2). The differences between Jutras' (2011) NHIMA study and Coffman's (2008) NHIMA study are the motivation to learn music, and practicing instruments daily in preparation of rehearsals, which is standard practice for preparation of community concerts. Perhaps Coffman's (2008) musicians were more serious in developing their music competency skills and thereby achieved higher levels of brain activity. Whereas, Jutras' (2011) musicians would fit the definition of health care patients or as Gates (1991) described them as recreationalists or as Stebbins (1992) described individuals as amateurs, volunteers, hobbyists, and dabblers. As the authors identified, the participants lacked

the motivation to play their instruments at home in preparation for band rehearsals, which are in preparation of music concerts. The results of these studies suggest the activity and continuity theories to explain older adults' behaviors.

Contrasting choral and band ensembles with solo virtuosos, Wagner (2006) reports that in his two and one-half years of field research, he observed 90 violinists, contacted 20 violin teachers, interviewed violin makers, and concert organizers (see Table 2.2). Wagner reports that learning the violin and becoming a trained soloist takes more than 15 years because the violin is the most technical of musical instruments. Wagner says children at age four or five years enter the professional world of performance where they are socialized through individualized mentoring and sponsoring. By age 18 to 25, they have full access to the international concert workforce. Virtuoso violinists practice about 8 hours each day to maintain their music competencies; they travel and relocate often for better teachers because of the importance they place for acquiring excellent careers. Virtuosos are among the elite of musicians, whether vocalists, instrumentals, or music composers.

### **Composing Music for Community Music**

In European Western Classical music, composers intentionally use specific key scales and tempos that performers (vocalists and instrumentalists) interpret and perform to evoke imagery and emotions from listeners to motivate their behaviors (e.g., protest music, nationalism, culturalism, war, love, etc.).

According to the late James Horner, a film score composer,  
My job is to make sure at every turn of the film, it's something the audience can feel with their heart ... When we lose a character, when somebody wins, when somebody loses, when someone disappears – at all times I'm keeping track, constantly, of what the heart is supposed to be feeling. That is my primary role (www.bbc.com/news).

Indeed, contemporary composers learned composition rules founded by the maestros (i.e., Mozart, Beethoven, Wagner, etc.), which NASM accredited Schools of Music teach.

European Western Classical music composition theory is linear math and geometry referred to by musicians as tonal math. Pythagoras of Samos, Rome (6<sup>th</sup>-century, B.C.E.), discovered the correlation between intervals of sound tones and their differences (i.e., octaves, thirds, fourths, fifths, sixths, sevenths), which is the foundation of European Western Classical music (Bonds, 2006). Vaughn (2000) cites several studies that focused on people who chose to learn music and those who learned music as part of their course curriculum. In both situations, people who study music show higher mathematical achievements than persons who do not study music. Unfortunately, the student cannot find literature on older adults who chose to learn music theory or math to determine whether they have mastered one or both. Hence, NAFME lobbies the U.S. Congress to uphold its mandate of the No Child Left Behind Act for music curriculum to be a core subject from kindergarten to twelfth grades (Shuler, 2012).

Psychologists Quinto, Thompson, and Taylor (2014), conducted an experiment to test whether certain music compositions do indeed affect emotions (see Appendix C for two examples of conductors' music composition scores). The study included  $N = 8$  expert musicians ( $n = 4$  violinists and  $n = 4$  vocalists). The researchers reported they chose violinists and vocalists

because both instruments are less restrictive than other instruments over a wider range of emotional cues. Musicians who were recruited through advertisements were  $M = 27.63$  ( $SD = 9.08$ ) years of age to 15 years ( $SD = 3.89$ ) of formal music education for 21.15 years ( $SD = 9.41$ ) of performing. Music compositions were monophonic (a melody without instrument accompaniment) consisting of 9 notes (range = 5-9 notes,  $M = 7.40$  notes) to evoke six emotions (i.e., tenderness, happiness, neutral, anger, fear, and sadness) from 42 listeners by composition, performance, and a combination of both. Quinto and colleagues (2014) reported listeners were capable of decoding various emotions from a few notes within 1 to 15 seconds, which agrees with other studies (Krumhansl, 2009; Vieillard et al., 2008). The experiment confirmed that both musical compositions and performances are useful either independently or in combination to evoke emotions. The emotion of fear was mostly expressed through composition, whereas, happiness and sadness were decoded through a combination of composition and performance. However, listeners incorrectly identified sadness and tenderness emotions through performance cues, despite musicians' music competencies to evoke neutral emotions. In statistical language, Quinto, Thompson, and Taylor (2014) reported "no significant interactions (mode,  $F(5, 77) = 0.63, p = .63$ ; mean F0,  $F(5, 77) = 0.24, p = .994$ ; average interval size,  $F(5, 77) = 0.13, p = .999$ ; and range,  $F(5, 77) = 0.00, p = 1.00$ ) or differences between communication channels (mode,  $F(1, 77) = 1.74, p = .191$ ; mean F0,  $F(1, 77) = 0.02, p = .903$ ; average interval size,  $F(1, 77) = 0.27, p = .604$ ; and range,  $F(1, 77) = 0.000, p = 1.00$ ) for all the variables" (p. 522). In plain language, statistics indicate that major key scales evoked happy, bright, light, and cheerful emotions, whereas minor key scales evoked mystical, restlessness, and sadness emotions as in other studies (Crowder, 1984; Gagnon & Peretz, 2003; Hevner, 1935; Thompson & Robitaille, 1992). Quinto, Thompson, and Taylor (2014) report their study confirms that music composition

and performance requires musicians to manipulate cues to obtain different emotional capabilities. This researcher wholly disagrees with Quinto, Thompson, and Taylor's (2014) assumptions. First, a composer mathematically creates music to evoke emotions and imagery, and second, performers are taught it is unethical to alter any part of a composer's work by imprinting one's personal values and beliefs in the performance of said music compositions.

In application to maintaining older adult membership in NHIMA and similar music organizations of the participatory arts, the repertoires should focus on the major key scales that stimulate the brain to release dopamine, serotonin, and noradrenaline for healthy aging. A limitation to this study was not having the composition scores to analyze, and there was no description of the 42 listeners to determine whether they were musicians or non-musicians to determine whether musicians' altered the compositions by performance or listeners were unable to interpret the meaning of sound tones and their interpretive meanings.

### **Summary**

This review of literature explained the advent of population aging in the U.S. that has increased life expectancy of an additional 30 to 40 years of life due to advancements in technology and medicine. Many older adults are pursuing community music participation in the participatory arts to promote healthy aging. More than at any time in U.S. history, applied gerontologists are needed to explore PMs to understand better the benefits of lifelong learning of music and its inherent benefits to health, wellness, happiness, and longevity. Whether older adults are former musicians from childhood or lifelong performers, the need to continue or adapt to aging processes to self-actualize the highest potential in life is a personal benefit. Many adults report community music participation is satisfied through the life course by singing, playing instruments, and composing music. It is unknown why, how, and when the motivation to

participate in community music began in the U.S. What is known from bio-psycho-social scholarly literature is that vocalists must maintain continuous proper nutrition, vigorous exercise, and lifestyle choices throughout the life course to promote health and wellness if they are to enjoy healthy aging and quality of life. Likewise, instrumentalists need to take care not to overuse or abuse their hands in the playing of instruments. Neurologists report music is a natural, non-invasive activity to engage both brain hemispheres simultaneously to increase blood flow to the brain and stimulate neurotransmitters, which promotes the long-term health of cognitive functioning and processing speeds into later years of life. Until engineers develop mobile neurology equipment to explore the effects of sports and dancing on brain health, both musicians and actors (memorizing lyrics and scripted dialog) continue to be the sole research models in the exploration of healthy aging and brain health.

## **CHAPTER III. METHODS AND MATERIALS**

The researcher chose three theories of aging to aid the phenomenological approach to understand better the motivations and behaviors of musicians during the life course. First, psychology's subfield of humanism that Maslow (1943a, 1943b, 1954) combined with the motivation theory to develop a human needs model (i.e., bio-psycho-social). This model explained the motivations of healthy older musicians to participate in community music ensembles. Second, sociology's psychosocial continuity theory that Atchley (1971, 1989) proposed that explained continued health of aging musicians (i.e., bio-psycho-social), and third, Rowe & Kahn's (1997) activity theory that explained adaptive behaviors of aging musicians (i.e., proper nutrition, vigorous exercise, cognitive stimulation, and social connectedness). The current researcher believed that research outcomes adequately explained the motivation, continuity, and adaptive theories in the role of music among PMs, and their bio-psycho-social health, wellness, and happiness.

### **Gap in Qualitative Literature**

Little is known about the effects of music on PMs' wellness; hence, there is a base of knowledge missing and a wide gap in research on the phenomenon of PMs. Therefore, time is of the essence for applied gerontologists to solicit PM scholars to collaborate in research with PM participants to discover the effects of lifelong community music participation to sustain wellness.

### **Purpose Statement and Research Questions**

The purpose of this study was to discover whether community music participation promotes wellness, and happiness. This study investigated PMs who began music education in childhood and developed music competencies to advanced, expert, and virtuoso as vocalists,

playing instrumentalists, composers, and conductors. The research questions that guided the study were:

1. What is the role of music among healthy older performance musicians?
2. What motivates healthy older performance musicians to sing, play an instrument, or compose music over the life course?
3. Is music life versus a livelihood to healthy older performance musicians?
4. Does participation in community music contribute to wellness?
5. Does participation in community music contribute to happiness?
6. Does participation in community music contribute to stronger relationships, and socialization?

### **Procedure and Recruitment**

The university's Institutional Review Board (IRB) approved this study (see Appendices D and E). All participants received the informed consent form (see Appendix F), and consented to having their interviews recorded for verbatim transcription. No monetary or gift incentives were offered to participants for volunteering to participate in the study. Following the completion of the study, all data collected were released to the Principal Investigator (PI) for safe retention on a password-protected computer and filed in a locked office cabinet to ensure confidentiality and anonymity of participants' identity. Participation criteria focused on PMs who were:

- age 50 and older
- living independently in a U.S. community
- either singing, playing an instrument, composing/conducting music
- either musically educated in K-12 and/or college, or private tutoring, or self-taught

- having music competencies of advanced, expert, or virtuoso
- regularly participating in community music
- having had audiology screening (or hearing aid treatment) within a two-year period, or volunteering to a simple piano hearing/singing test in participants' vocal singing range
- not consuming antidepressants for the treatment of depression, alcoholism, anxiety, and dementia – antidepressants are synthetic neurotransmitters, which counteract natural neurotransmitters from releasing to nerve cells (Kavalali, 2014; Gu, Wang, Yuan, Guo & Huang, 2015)
- not physically impaired to prohibit either (a) standing on risers with other choral singers or (b) sitting in one's respective instrumental section of orchestra, symphony or band.

To recruit participants, a purposeful snowball sampling technique was used whereby community music directors were contacted to help recruit PMs who met the selection criteria. The recruitment materials (see Appendices F-L) were sent to potential participants, and after they volunteered to participate, an informed IRB consent letter (see Appendix F) and interview questions (see Appendices K-L) were emailed to them. In addition, the researcher's PM acquaintances and faculty member referrals were recruited using the same materials. Overall, participants were recruited from seven regions of the U.S. from September 2015 to March 2016. Of the 21 potential participants, three were exempted for either untreated hearing loss or consumption of antidepressants. A phenomenological approach was used by asking semi-structured interview questions that sought to discover the role of music in PMs lifetime of experiences. Appendix K shows the seven-item demographic questions and Appendix L shows the eighteen semi-structured interview questions. These instruments were pilot tested among non-participating PMs for validity and time duration; both qualified.

Administered either face-to-face or by telephone, interviews ranged from 45 to 90 minutes. Because the author is a PM, her bias as an “insider” was made known to the participants; therefore, any preconceived notions (bias) were set aside during data collection, transcription, and coding for validity and analysis. Further to qualitative trustworthiness, the researcher’s reflections of participants’ answers were recorded in memos and journals (called reflexivity or bracketing [ ] see Appendix J), and combined with participant transcripts to remove conjecture, so that evidence emerged on the phenomenon of PMs’ lifetime experiences in community music participation (Hays & Singh, 2012). All transcripts were typed verbatim, then aliases assigned to each PM to protect their identity. Next, transcripts were coded into themes and subthemes generated by Atlas.ti 7.5, a software application that is used extensively among qualitative researchers (Bacsu et al., 2012; Prieto-Flores, et al., 2010). The interpretation process used a narrative structure to humanize the storied lives of PMs and the researcher’s life views, which is the norm in qualitative research.

## **CHAPTER IV. THE ROLE OF MUSIC AND COMMUNITY MUSIC PARTICIPATION**

### **Abstract**

The purpose of this innovative qualitative study was to explore the role of music in the lives of healthy older performance musicians (PMs). Seven demographic and eighteen semi-structured interview questions were asked from a convenience sample of eighteen PMs. The findings illustrate the role of music to PMs were (1) music is life and a livelihood (2) knowledgeable conductors and their choices of challenging repertoires, (3) the promotion of camaraderie, and relationships, and (4) socialization by travelling internationally to perform. These findings have great importance to applied gerontologists, PM scholars, and music educators because healthy aging and quality of life emerged on the phenomenon on the role of music among PMs.

**KEY WORDS:** lifelong learning of music, healthy musicians, healthy aging

What used to be an anomaly of aging is the norm in the twenty-first century. Indeed, over the past century, life expectancy increased from 47 years to 80 years due to decreases in mortality by acute illnesses (Population Reference Bureau, 2002). This resulted in millions of adults living an additional 30 to 40 years of life (Population Reference Bureau, 2013). Many older adults pursue personal interests, and community music (i.e., choirs, symphonies, and bands) is one personal interest that older PMs choose to invest their time, energy, and resources.

Community music is an ancient practice of social entertainment performed by musicians in venues that are indoors or outdoors, either large or small. Community music repertoires reflect a community's cultural values, beliefs, and behaviors (Veblen, 2007). Veblen states that community music has been internationally researched for the past one hundred years; yet there is

little agreement among researchers because community music varies in all societies such as characteristics of musicians, conductors, repertoires, and relationships.

Not only is community music ancient, but so, too, is the industry-standard from 1766 to 1843 of classifying musicians as either paid “professionals” (virtuoso) or non-paid “amateurs” (beginner, intermediate) (Bonds, 2006). However, all that changed in 1924 upon the founding of the National Association of Schools of Music (NASM, 2016); the sole accrediting body in the United States of America (USA) for music conservatories, colleges, and university schools of music. Likewise, in 1937 upon the founding of the National Association for Music Educators (NAfME, 2016), this body has set the licensure standards for music educators of kindergarten to twelfth grades. To educate the public, NASM freely provides music competency requirements from kindergarten to college students in music categories of both the arts and sciences in its Handbook 2015-2016 (NASM, 2016). Although NASM accredited institutions have the freedom to design their curricula, they must fulfill the core music standards. Therefore, NASM and NAfME define and regulate the standards for classifying musicians based on music competencies from beginner, intermediate, advanced, expert, and virtuoso – not “professional,” “amateur,” “paid,” and “non-paid” as it did in 1766-1843. Therefore, to identify musicians in the twentieth and twenty-first centuries is to focus on their *achieved* music competency levels that define them, not financial compensation to perform.

Barry and Henry (2015) reported conductors and music conservatory PMs possess the most comprehensive music education compared to any other category of musicians. Wagner (2006) supports this statement by reporting findings on virtuoso violinists that spend eight hours per day just to maintain music competencies. Music educators are responsible for teaching music basics (i.e., fundamentals, scales, keys, intervals, chords, time, and notation), harmony,

counterpoint, orchestration, and transposition that form musical compositions (Benward & Saker, 2003). Music educators also teach the importance of accurately interpreting and performing repertoires without imprinting one's personal interpretation, which alters the composer's intentions. In European Western Classical music, PMs do not imprint their perception of composers' works by improvisation; rather, PMs respect the integrity of the original composition in performance (Bonds, 2006). Hartley (2006) believes music educators should be teaching students that participation in community music is lifelong, so they do not stop performing after high school. Moreover, Hartley believes music educators should be teaching all age groups because music would benefit everyone biologically, psychologically and sociologically.

Since Amadeus Mozart, composers have intentionally composed music to evoke emotions and imagery from listeners to motivate behaviors (Bonds, 2006). The motivators in European Western Classical styles are different from genres (1900 – 2016), which primarily focus on politics to effect change in society such as nationalism, culturalism, wars, and civil rights, that is, until societal behaviors change, then the motivating lyrics and/or genres end because they served their purpose (Bonds, 2006). Nevertheless, the methods used to motivate people affects both PMs and their audiences for a lifetime because the visuals and sounds encode to long-term memory that remain intact for recall despite dementias (Jacobsen, et al., 2015).

As generations enter retirement, the role of music (Colucci, 2014; Kim, Fridgeon, & Kim, 2014; Schwadel, 2011) may emerge as the forerunner of personal interests in the USA because many citizens received music education in youth thus making it an integral part of their lives.

## Background

For 70 years, PMs have been rarely invited to participate in research; indeed, PMs voices are absent in the qualitative literature, but are pertinent to understand the relationship of music on aging (Cohen, Perlstein, Chapline, Kelly, Firth & Simmens, 2006, 2007; Solé, Mercadal-Brotons, Gallego & Riera, 2010; DeVries, 2012; Hanna-Pladdy & Gajewski, 2012; Holmes & Holmes 2013). On the one hand, gerontology specialists who specialize in geriatrics have investigated non-performance musicians (NMs) living in long-term nursing facilities to measure quantitatively the effects of music on chronic diseases and dementias. Generalized effects of music on illnesses reportedly improved (1) emotions, (2) physical health, (3) cognitive health, (4) spiritual health, and (5) social health (Schweinsberg, 1981; Karras, 1987; Abdellah, 1988; Goddaer & Abraham, 1994; Spitzer & Coutinho, 2014). On the other hand, interdisciplinarians (i.e., educators, epidemiologists and other medical practitioners, demographers, and statisticians to name a few) have investigated NMs living in communities and quantitatively measured the effects of music on them. Creech, Hallam, Varvarigou, McQueen, and Gaunt (2013) conducted a study with older adults to explore the relationship between singing, other activities, and well-being. The authors reported singing improved (1) mental health, (2) physical health, and (3) well-being compared to other activities such as learning a foreign language, reading books, yoga exercises, and forming social groups, which agrees with other studies (i.e., Bowers, 1998; Hays & Minichiello, 2005; Joseph & Southcott, 2014, and Skingley, Martin, & Clift, 2015).

One topic qualitative researchers agree on is the paucity of research literature on PMs who participate in community music (Darrough & Boswell, 1992; Carr, 2006). Arts Victoria (2007) reported "...communities that embrace diversity, creative expression and cultural activity are richer, stronger and more able to deal with social challenges" (p. 2) ... and "greater active

engagement in performing arts by older people (50+) is positively related to enhanced individual and community well-being” ... that creative activity “can facilitate successful ageing by encouraging the maintenance and development of cognitive skills, motivation, problem-solving ability, and enhanced confidence that can influence all facets of day-to-day life” ... which “enhance any age and are vitally important in ensuring successful and active ageing” (pp. 1-2).

### **Psychosocial Theories of Motivation, Continuity, and Activity**

There are three psychosocial theories from sociology that might well explain the behaviors of generational PMs since the Second World War. First, Maslow’s (1943a) motivation theory suggests that when people meet their physiological and safety needs, they are motivated to pursue higher levels of human needs of relationships, self-esteem, knowledge and understanding, aesthetics, and self-actualization. Maslow (1943b) said, “A musician must make music, an artist must paint, and a poet must write if he is to be ultimately happy. What a man can be, he must be. This need we may call self-actualization” (p. 382). Second, Atchley’s (1971, 1989) continuity theory suggests that as older adults make adaptations in middle and later life, they define the normal aging process in human development (i.e., lack of physical and mental disease). For example, older adults will maintain lifestyle activities and relationships they adopted in younger years by formulating strategies to maintain physical and mental health (Atchley, 1989). Third, Rowe and Kahn’s (1987; 1997; 1999; 2015) activity theory suggests that healthy aging involves: (1) high mental and physical functioning, (2) actively engaging with others (i.e., communicating, support), and (3) avoiding diseases and disability.

### **Gap in Qualitative Research**

As far as this researcher has been able to uncover, little is known about the effects of music on PMs’ community music participation; hence, there is a wide gap in qualitative research

on the phenomenon of PMs. Therefore, time is of the essence for PM scholars to collaborate with applied gerontologists, who study the aging process, to discover the effects of lifelong community music participation on wellness, aging, and quality of life.

### **Purpose Statement and Research Questions**

The purpose of this study was to explore the role of music in the lives of PMs, and discover their motivation to sing, play an instrument, and compose. The aim was to explore how performing community music influenced the current lives of PMs. Specifically, PMs who began music education in early childhood and developed music competencies to advanced, expert, and virtuoso as vocalists, instrumentalists, composers, and conductors, who are themselves PMs. The research questions that guided this study were (1) *What is the role of music among healthy older performance musicians?* (2) *What motivates healthy older performance musicians to sing, play an instrument, or compose music over the life course?* (3) *Is music life versus a livelihood to healthy older performance musicians?* (4) *Does participation in community music contribute to stronger relationships, and socialization?*

### **Methods and Procedures**

The university's Institutional Review Board (IRB) approved this study. All participants consented to having their interviews recorded for verbatim transcription per the Informed Consent form. A phenomenological approach was used to ask semi-structured interview questions that sought to discover the role of music in PMs' lifetime of experiences. To understand better the role of music in the lives of PMs, the researcher designed interview questions that focused on community music participation, wellness, and happiness. Participation criteria focused on PMs who were (1) age 50 and older, (2) living independently in a U.S. community, (3) either singing, playing an instrument, composing, or conducting music (4) either

musically educated in kindergarten through twelfth grades and/or college, or private tutoring, or self-taught, (5) having music competencies of advanced, expert, or virtuoso, (6) regularly participating in community music, (7) having had audiology screening (or hearing aid treatment) within a two-year period, or volunteering to a simple piano hearing/singing test in participants' vocal singing range, (8) not consuming antidepressants for the treatment of depression, alcoholism, anxiety, and dementia, and (9) not physically impaired to prohibit either (a) standing on risers with other choral singers or (b) sitting within the designated orchestral sections to perform. Participants were recruited using the purposeful snowball sampling technique whereby music directors were contacted to help recruit PMs who met the selection criteria. The recruitment materials were sent to potential participants, and after they volunteered to participate, an informed consent letter and interview questions were emailed to them. In addition, the researcher's PM acquaintances and faculty member referrals were recruited using the same materials. Overall, participants were recruited from seven regions of the USA from September 2015 to March 2016. Of the twenty-one potential participants, three were exempted for either untreated hearing loss or consumption of antidepressants. No monetary or gift incentives were offered to the participants for volunteering to participate in the study. Table 4.1 shows the seven-item demographic questions and the eighteen semi-structured interview questions. These instruments were pilot tested among non-participating PMs for validity and time duration; both qualified. The semi-structured questions guided the researcher and participants' narratives to ensure the narratives did not depart from the research questions that guided the study throughout the methods process. Table 4.2 shows participants' characteristic identities. Administered either face-to-face or by telephone, interviews ranged from 45 to 90 minutes. Because the author is a PM, her bias as an "insider" was made known to participants. Any preconceived notions (bias)

were set aside during data collection, transcription, and coding for validity and analysis. Further to qualitative trustworthiness, the researcher's reflections of participants' answers were recorded in memos and journals (called reflexivity or bracketing [ ]), and combined with participant transcripts to remove conjecture, so that evidence emerged on the phenomenon of PMs lifetime experiences in community music participation (Hays & Singh, 2012). All transcripts were typed verbatim, then aliases assigned to each PM to protect their identity. Next, transcripts were coded into themes and subthemes generated by Atlas.ti 7.5, a software application that is used extensively among qualitative researchers (Prieto-Flores, et al., 2010; Bacsu et al., 2012). The interpretation process used a narrative structure to humanize the data of PMs' storied lives and the researcher's life views, which is the norm in qualitative research.

Table 4.1

*Seven Demographic Questions and Eighteen Semi-Structured Questions*

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Demographic Questions
<ol style="list-style-type: none"><li>1. What is your gender?</li><li>2. What year were you born?</li><li>3. What is your marital status?</li><li>4. What is your race/ethnicity?</li><li>5. What is your highest level of education?</li><li>6. What year did you achieve your highest level of education?</li><li>7. What is your employment status? <input type="checkbox"/> F-T <input type="checkbox"/> P-T <input type="checkbox"/> Retired <input type="checkbox"/> Other</li></ol>
Semi-Structured Interview Questions
<p>Community Music Participation</p> <ol style="list-style-type: none"><li>1. What motivates you to sing, or play an instrument, or compose music for community music?</li><li>2. What does it mean to you to perform in community music?</li><li>3. (a) How would you rate your current music skill level? <input type="checkbox"/> advanced <input type="checkbox"/> expert <input type="checkbox"/> virtuoso (b) How long did it take you to develop your music skills?</li><li>4. How long have you participated in community music?</li><li>5. What music genre do you enjoy performing most?</li><li>6. (a) Do you travel statewide, nationally, or internationally to perform in community music? (b) How important is travel to you? (c) If you do not travel, would you like to?</li><li>7. How do your music performances express your values and beliefs to audiences?</li><li>8. (a) Describe any emotional memories you associate with music. (b) What age were you affected by that music?</li><li>9. Can you identify a particular characteristic that maintains your participation in community music? By this, I mean is your participation based on the camaraderie of musicians, or professional performance attire, music venues, travel, or any other characteristic?</li><li>10. Describe your satisfaction of participation in community music. By this, I mean are the music repertoires and venues interesting and challenging to maintain weekly practice for rehearsal and performances?</li><li>11. Would you perform music whether you were paid or not to perform in community music? By that, I mean is music your life or livelihood?</li></ol>

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Table 4.1

*Seven Demographic Questions and Eighteen Semi-Structured Questions (continued)*

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Semi-Structured Interview Questions

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Health

12. Can you explain how your participation in community music has helped you to age well? Or doesn't music participation help you to age well?

13. What adaptations have you made to your participation in community music because you are growing older?

14. What personal benefits do you gain in participating in community music?

Happiness

15. (a) What motivates you to continue learning music? By this, I mean what is the motivation to practice your repertoires in preparation of rehearsals and performances?

(b) Approximately how many hours each week do you practice your repertory?

16. Does learning music influence your sense of happiness? If yes, in what way?

17. Describe the relationships you have developed with musicians and/or audiences since participating in community music.

18. How have other musicians and audiences changed your interactions with other people in your community?

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Table 4.2

*Participant Identities*

State	Alias	Gender	Date of Birth	Marital Status	Ancestry	Education	Year of Degree	Employment Status
CA	<i>Charles</i>	Male	1941	Married	Northwestern Europe	MS	1972	Retired
CA	<i>Lillian</i>	Female	1941	Partner for 20 years	Africa	MA Education	1982	Retired
CA	<i>Margaret</i>	Female	1958	Married	Eastern Europe	BA Music	1980	Self-employed software developer
CA	<i>Carol</i>	Female	1942	Married	Northwestern Europe and Scandinavia	PhD Physics	1970	Retired professor
CA	<i>Jane</i>	Female	1949	Married	Northwestern Europe	BA Psychology MS Psychiatric Social Worker (LSW)	1971 1976	Retired
CA	<i>Rachel</i>	Female	1950	Married	Eastern Europe	BA Spanish; and Middle School Teaching license	1972	Retired
CA	<i>James</i>	Male	1942	Married	Northwestern Europe	BS Economics MS Business Admin.	1964 1977	Retired; community volunteer worker
CA	<i>Deborah</i>	Female	1949	Married	Eastern Europe	BA French	1970	Retired
CA	<i>David</i>	Male	1954	Divorced	Eastern Europe and Western Europe	Juris Doctorate (JD)	1979	Retired
CA	<i>Russell</i>	Male	1954	Married	Eastern Europe and Western Europe	MS Education – England	2006	Full-time

Table 4.2

*Participant Identities* (continued)

State	Alias	Gender	Date of Birth	Marital Status	Ancestry	Education	Year of Degree	Employment Status
FL	<i>Michael</i>	Male	1956	Married	Spain	PhD Music Education	2013	Full-time ins. agent; part-time choir conductor
FL	<i>Phillip</i>	Male	1954	Married	Northwestern Europe	PhD Music Education	1985	Full-time
MN	<i>George</i>	Male	1925	Married	Northwestern Europe	MD Epidemiology	1948	Retired MD; part-time professor
MN	<i>Nicholas</i>	Male	1934	Married	Scandinavia	BS in physics and mathematics MS metallurgy physics, MD Internal Medicine	BS 1966 MD 1973	Retired physician and university professor
ND	<i>Frederick</i>	Male	1949	Married	Northwestern Europe and Scandinavia	BA Speech & Theater	1974	Retired; self-employed full-time performer
NJ	<i>Mark</i>	Male	1956	Married	Northwestern Europe and Scandinavia	MA Music Education	1985	Full-time
SD	<i>Douglas</i>	Male	1949	Married	Northwestern Europe	MA Educational Psychology	1987	Retired; self-employed full-time performer
TN	<i>Jan</i>	Female	1954	Married	Northwestern Europe	Some college in art and music	1973	Self-employed, full-time performer

### Findings

The findings of this study help to build a base of knowledge on PMs that answered the research questions What is the role of music among PMs? and What motivates PMs to sing, play an instrument, compose, and conduct music over the course of their lives? Table 4.3 shows

participants' music education from kindergarten to college; all participants learned more than one instrument. Moreover, all participants were members in one to six different ensembles at the time of the interviews; findings revealed participants' participation in community music ranged on average from 47 to 57 years. Table 4.4 shows PMs self-reported music competencies, which evenly distributed in three categories: Advanced, Advanced to Expert, and Expert with three reporting Expert to Virtuoso, and one a Virtuoso. The primary instrument for eight participants was singing, whereas ten participants reported multiple primary instruments. Seventeen of eighteen participants enjoyed travel as part of their community music participation; however, four no longer wished to travel and one participant never traveled.

Table 4.3

*Characteristics of Participants' Early Music Education*

Characteristics	N	%
Age of PMs Early Music Education		
Age 3-10	17	94.4
Age 11-20	1	5.5
Community Music Participation [kindergarten to college]		
Composers	1	n/a
Vocalists	3	n/a
Instruments		
Violin	1	n/a
Harp	4	n/a
Guitar	1	n/a
Clarinet	1	n/a
Flute	1	n/a
Recorder	1	n/a
Piccolo	1	n/a
Saxophone	1	n/a
French horn	1	n/a
Trumpet	6	n/a
Piano	1	n/a
Pipe Organ	1	n/a

Table 4.4

*Characteristics of Participants' Music Competencies, Instruments, Role, and Travel*

Characteristics	N	%
Self-Assessed Music Competency Level(s) [multiple instruments]		
Advanced	5	27.7
Advanced + Expert [multi-primary instruments]	5	27.7
Advanced + Expert + Virtuoso [multi-primary instruments]	1	5.5
Expert	5	27.7
Expert to Virtuoso [multiple primary instruments]	3	16.6
Virtuoso [multiple instruments]	1	5.5
Community Music Participation [current primary instruments]		
Vocal	8	44.4
Vocal + Composer	1	5.5
Vocal + Guitar	1	5.5
Vocal + Guitar + Harmonia	1	5.5
Vocal + Organ + Piano + Composer + Conductor	1	5.5
Vocal + Piano + Guitar + Composer	1	5.5
Vocal + Saxophone + Clarinet	1	5.5
Vocal + Trumpet	1	5.5
Saxophone + Clarinet	1	5.5
Flute + Piccolo	1	5.5
Trumpet + Composer + Conductor	1	5.5
Music is Life or Livelihood		
Life [no payment]	10	55.5
Life and Livelihood [with and without payment]	8	44.4
Travel		
Yes, enjoy travel		
Local + statewide	4	22.2
Local + statewide + national	1	5.5
Local + statewide + international	2	11.1
Local + statewide + national + international	8	44.4
National + international	1	5.5
Yes, used to enjoy travel		
Local + statewide [no longer valuable outside of state]	1	5.5
Local [okay] + [statewide + national + international [expensive]	1	5.5
Local + statewide + national + international [no longer valuable]	1	5.5
International [aging]	1	5.5
No, does not enjoy travel [aging]	1	5.5

Before advancing into the dominant themes, it is important to mention that values and beliefs were built into the interview framework. Values and beliefs are wide-ranging and personal – they guide people throughout their daily lives – whether it is by the sociological norms of family, government, economy, education, and religion or by genetic ancestry or regional residence or psychosocial reasons. Therefore, musicians’ music identity determined their motives, values, and beliefs (Dolfsma, 1999) in choosing (1) conductors and their choices of repertoires (Stebbins, 1992), (2) ensembles and venues (Stebbins, 1992), and (3) relationships by music venues (Veblen, 2007). This study included (4) the motive to travel to build a base of knowledge in the qualitative literature by exploring socialization among PMs who perform new or European Western Classical and American repertoires to international audiences.

### **Dominant Themes**

The dominant themes that emerged from narratives and the researcher’s field notes and journals were (1) music is life and a livelihood to perform, (2) conductors, new repertoires, and emotional memories, (3) camaraderie and relationships, and (4) travel and socialization.

*Music is life and a livelihood.* Community music reflects the interconnectedness of a community’s cultural values and beliefs; therefore, personal and social well-being of PMs’ music identity was core to the reasons participants believed music was their life and/or livelihood.

Table 4.4 shows ten participants reported, “music is life,” whereas eight participants reported “music is life and a livelihood.”

Well, it’s my livelihood but it’s a big part of my life, too, and I wouldn’t do it if I didn’t enjoy it. ... I regard myself more as an entertainer.... [Frederick]

Well, for me it’s just the joy of playing music and the joy of playing communally, and particularly in Jazz, the creativity part of it. ... I’m the guy and his wife that puts on the

musical series ten weeks a year in Florida; and we have a real community, a real identity, and they love it ... it's their best night of the week. So, there's a great deal of identity to it, but mainly it's the job of playing that gives me pleasure. [George]

I'm not paid. I give this time ... actually ... it's my opportunity to continue to grow musically. I'm sure if I were not in any group, I would not be at the point where I am today musically. Music is my life, not my livelihood. [Lillian]

I prefer to be paid, but it depends on the situation whether or not I am paid. But I am a professional and that's how I earn a portion of my living but there are certain times I choose not to be paid, but the choice is mine. [Michael]

I'm very careful not to take paid gigs where I can avoid it because there are so many musicians that need the money, and I don't. I just want to sing and play and [the ensemble] does very challenging modern works, and it's a real treat to be in music and perform. [Carol]

I'm a folk singer and songwriter and I'm politically, emotionally, and socially motivated as far as writing goes. I've been singing since I was old enough to cry, so that's my number one instrument.... So, singing is part of my being, and I play instruments so I can accompany my voice. [Jan]

Pay is just a little spice on the top ... it's got nothing to do with why I do music. I think it's a question of passion ... a passion for life, a passion for connecting with other people.... I may not be expressing my personal beliefs, but it's the passion of belief itself that I hope to get across in music or just passion in general. [David]

I think it's a kind of calling ... I equate it to someone who doesn't really have a choice, but to do it. It is perhaps the thing that makes you feel the most attached to humanity ....

I'm the happiest when I'm making music, I know that. [Phillip]

Therefore, music identities, values, and beliefs motivated ten PMs who reported "music is life" and eight PMs reported "music is life and a livelihood."

***Conductors are Important When Choosing an Ensemble.*** One particular value and belief to emerge was skilled conductors who chose appropriate repertoires and venues that showcased PMs' music competencies. Conductors are themselves PMs, but more musically educated in composition theory than other PMs. In terms of time investment, participants who are conductors and music educators invested as much time practicing and rehearsing repertoires in preparation of community music performances as solo virtuosos, if not more. As Table 4.4 shows, one-half of participants maintained their participation in music ensembles over their lifetimes because of their conductors' knowledge, skills, and abilities to choose repertoires that fit PMs' competencies. This is also true for soloists and small ensembles that chose their repertoires.

I wouldn't seek out an ensemble, but I do seek out a conductor..... [Charles]

...the conductor, friendships, and repertoire ... [they] keep me going. [Jane]

I think the two things that drive me are the quality and the professionalism of the Directors [conductors], and that's important to me because I view them as my [music] teachers. For me, they're the ones who set the tone, the pace, and the piece ... I never had that leadership before now. [James]

... I enjoy the educational aspects, and some of the challenges of learning ... [Rachel]

I ... will try to memorize as much of my scores as I can just because the conductor has your eyes. We all know the difference a good conductor makes in the performance!

[Deborah]

... [I] will memorize as much as possible so I can watch the director. [Russell]

... every time I cross the bridge to play with musicians ... I know that I'm in *rare* company. So, the one characteristic that's always in the forefront of my mind is the intelligence of the musicians and conductor. [Mark]

Mainly, being a conductor, I think what they [repertoires] express is my taste ... my musical taste and my interpretation of those pieces of music. So, I think it tells a little bit [about me] as a person and certainly my musical intellectual taste. [Phillip]

Therefore, participants believed conductors' choices of repertoires were notably important to supporting their membership in music ensembles, maintaining music competencies, stimulating lifelong learning of music, and promoting social connectedness through performance.

***Performing New, Challenging Repertoires with a Subtheme of Emotional Memories.***

PMs were asked what music styles and genres motivated them to maintain participation in community music. Most participants had difficulty choosing only one style or genre. Therefore, participants narrowed their primary choices to about three styles or genres each, which overlapped by choral, instrumental, sacred, and secular repertoires. The following European Western Classical styles are divided by historical timeline: Renaissance, Baroque, Classical (early and late), and Modern. Participants' secondary choices also overlapped and were divided into eight categories: *Christian* (i.e., British and American scriptural hymns 1700-1940, Negro Spirituals 1840-1985, and traditional English and American Christmas songs), *Barbershop* (i.e., Negro 1882, White 1930) *Folk* (i.e., American, Contemporary, Celtic, Brazilian); *Musical*

*Theater* (i.e., Broadway 1920-1980); *Dance* (i.e., Big Band); *Jazz* (i.e., Dixieland Jazz, Swing, Traditional, Fusion, New Wave); *Rock and Roll* (i.e., Counter-culture, Psychedelic, Heavy Metal, Dance Rock, Folk Rock, Pop Rock, Rockabilly); *New Orleans* (i.e., Folk Blues, Rhythm & Blues, Country Blues); *Country* (i.e., Early Country, Country Western).

Three sociological life course perspectives might explain PMs choices of challenging repertoires that showcased the talents and pride of accomplishments. First, the *personal attributes* of PMs' genetic and psychological traits reflect their need of cognitively challenging repertoires. Second, *cohort effects* of PMs age group or combined with familial age group's enjoyment of Broadway, Big Band, and Swing Jazz genres. Third, *period effects* of PMs that shared a historical era of Folk, Country, Rock and Rock, and Blues genres.

For me, it's the chance to learn new music. If I'm not learning new things every week, I feel like I'm kind of dead behind the ears. [Carol]

The difference between just singing along with music and really performing a piece is how intimately you get to know the music. [Margaret]

The mental stimulation both in terms of learning a new piece of music and coming into contact with these other people. [Rachel]

Pursuing and solving a challenge is what gives me happiness and growth – new music. [Nicholas]

I have found in my life that musicians tend to be interesting people. They tend to be well read, intelligent, and Renaissance musicians love the history of the art. ...I've found that among Renaissance people there are a lot of scientists, lawyers, doctors, teachers ... a lot of well-educated people ... I like that. [David]

... I feel it is my job to convey the emotions of music to the audience ... I want them to feel what I feel when I sing.... [Russell]

It [repertoires] gives me satisfaction and complex challenges. [Mark]

Overall, practice was required to ensure the presentation of each musical piece that showcased music competencies from advanced to virtuoso. According to PMs, developing their music competencies has been a lifelong journey they enjoyed and will continue to enjoy.

***Emotional Memories Linked To Repertoires.*** Beginning with the music maestros of European Western Classical music, composers have intentionally written in modulating key scales, inversions, and tempos to evoke emotions and imagery to motivate listeners (Bonds, 2006). Therefore, PMs were asked which repertory affected them the most over their lifetime. Participants reported European Western Classical repertoires and twentieth century genres not only evoked emotions and imagery, but also the event at the time of hearing or performing composers' works.

DW Goethe wrote *Prairie Anthem* ... every time I would perform it, I watched people enjoying it, and that just speaks to our land, to where we're from, the sense of the land, wide-open spaces. [Frederick]

... I love some of the sacred music because it's part of my heritage and tradition; I love especially the tunes from 1840-1880s. ... [and] I love Rockabilly very much. [Douglas]  
Giovanni Gabrieli ... it was [performed] in a great big cathedra and the choir was divided into three or four parts in polyphonic, and I just cried. [laughs] I just sat there and cried.  
Yes, God was omnipresent. [I was] 15 or 16 years old. [Charles]

... Broadway musicals such as the *King and I*, and *South Pacific*.... [Nicholas]

Some PM narratives included extensive emotional memories because of longer lifetime musical experiences and music careers.

The hymns and Christmas songs in Junior High School, Tom Lehrer songs in college. But certain hymns are well recorded in my memory both the words and melody, and then there are some songs that were popular when I was at college in graduate school ... there's a bunch of songs that are very deeply encoded in my memory that mean a lot to me ... some are silly [laughs] like Tom Lehrer ... he had about 50 songs ... [sings melody] and Christmas carols [sings melody] and Irish ballads [sings melody], hymns [sings melody], and Cowboy songs [sings melody]. [George]

One that automatically tops my mind is a choral anthem, of course, the orchestra was playing, too, it is called *Thou, Oh Lord*. It takes scripture right out of [*sic* Psalm 3:3-4] where it says, "You're my glory, the lifter of my head." The words are very repetitive, and then in the middle of the song it has a good deal of polyphony where every part is singing independently of one another at different times and then the phrase repeats. I knew that every time we would sing that song, before we got to the end of the song, the congregation would be standing to their feet applauding. By the time of the climax or apex of the song, they were *so emotional* ... people could identify with the text and the building of the momentum and volume of the music ... it was just so overwhelming in a positive sense. Yeah, that's just one of those high moments in life that you remember. [I was] age 45 to the present. [Michael]

... I always remember our choir director who was this wonderful gentleman; he was the choir director, organist, and music director for the whole church. As I [*sic* look] back to that I think, "How did one person do this, and do it so well?!" He played, as we were

walking into the church as part of the graduation, Mendelssohn's *War March of the Priests*. I've never, ever forgotten that ... it's a very lively march-type piece ... it's a wonderful organ piece ... we had this classic 19<sup>th</sup> century organ in the church and that just stuck with me to this day, and that was in 1956. The other thing that affected me more than anything else was the music in the St. Matthew's Church during JFK's funeral [Samuel Barber's *Adagio for Strings*]. If you've ever been to a military funeral and heard the music, you won't find a dry eye, including mine. And when I joined the [ensemble], we sang Beethoven's *Ode to Joy*, which I remember to this day. I was age 14 for Mendelssohn, age 21 at JFK's funeral, and Beethoven I was age 65. [James]

There would be too many to remember. First, I call those [emotional memories] aesthetic experiences; and I think that any of us in the business would have a number of aesthetic experiences, which are bigger and better than the individual experiences. And those have just been so memorable; there are a hand-full that just stick out throughout my career. When those happen, you are truly transported. It's almost like having an out-of-body experience. ... I have had dozens and dozens of those opportunities. Over the years, what moves me changes, too. I think that's one of the powers of music is that it has the power to help you intellectually evolve but it also helps you spiritually and emotionally evolve. ... One that is particularly poignant to me was conducting my high school choir at the International Choral Festival in Mexico City, in the old cathedral downtown, and the kids sang the absolutely best they'd ever sung in this beautiful cathedral. I picked the music that would reflect what would sound good in that big space. I remember just having chills the entire time because the sound was so beautiful in that space ... one of the pieces was *Ave Verum Corpus* by William Byrd. More recently ... Brahms *Requiem* particularly

spoke to me. I was age 26 when I conducted *Ave Verum Corpus*, and age 60 when I conducted the *Requiem*. [Phillip]

PMs' statements confirm that composers do intentionally choose musical elements to evoke emotions and imagery from listeners. Indeed, PMs recalled the emotional, spiritual, psychological, cultural, sociological, political, and economic events that encoded with music to their long-term memories that continued to stimulate physical reactions to those compositions.

***Music Motivates Camaraderie, and Relationships.*** This theme emerged from the importance of comfort and strong lifetime relationships that improved quality of life. Active engagement positively related to the enhancement of both the individual and the community, which linked to healthy aging. Community performances and venues that brought diverse people together broadened participants' social networks and life experiences. Indeed, social networks broadened for participants that traveled nationally, and internationally.

I think I would have to say the camaraderie with the other performers...the whole is greater than the sum of the parts, and that motivates me a lot. [Deborah]

.... the camaraderie with musicians, the people in our [ensemble] ... some of them I've known for 40 years. [Lillian]

I think ... it probably comes to a sense of connection with people... all my deepest friendships have come through playing with other professional musicians or amateur musicians, lifelong friends. [Douglas]

Oh, it's the camaraderie! One thing I love about [the ensemble] is that it keeps me around smart people. The level of intelligence of that group is *astounding*. And the variety ... we've got people who are lawyers, doctors, research scientists, computer people ... they come from a lot of different backgrounds ... it is an extended family. [Margaret]

The camaraderie with the musicians and the music, which just touches so much of my soul, and being able to share that, I think are the most important things. [Jane]

If you're going to be a good musician, you have to be competent, you have to care about your craft, you have to care about other people, you have to communicate your craft, and you have to have compassion about what you're doing and how you interact with people. [Nicholas]

One thing that music provides in performing music is that it puts me into situations where social interaction is part of the territory ... it's done with people of similar interests and similar histories and lots of common ground there. [Mark]

Several participants established broad social networks because of the nature of their careers, travel, and preferences of music styles.

***Socialization Through Travel.*** Participants reported their relationships with fellow musicians and international communities deepened and enlarged by travelling to perform community music statewide, nationally, and internationally.

I've put together entertainment for scientific meetings I'm involved with celebrating my work ... And I've put together bands in Moscow and Sweden and Osaka and Austria. And I've met many medical and musical professors in the world. I don't necessarily travel for music, but I travel with music! [laughs] ... That goes all the way back to Jazz and then that very special relationship with Poppy Dole's greatest current Jazz clarinet Devin Christopher ... to play with them, but several contacts with Woody Allen ... we spent wonderful weekends together in the 1970s and they were all in ... contact with notable people and notable audiences.... I have contacts with people all around the world

... relationships with individuals, individual musicians, audiences, and *very rich, very rich*. [George]

It's [travel] very important...I would go tomorrow...it can be very expensive, but I think it's very important for three reasons: It's venues, genres, and people that you would not meet otherwise. [Deborah]

Participants reported the importance of being socially connected to other PMs and audiences, which enriched their lives on average from 47 to 57 years, but one participant 67 years and one 81 years. Table 4.4 shows that participants who chose to travel to perform reported deeper relationships with other PMs, and enlarged social networks from travel.

### **Discussion**

This phenomenological study explored the role of music to healthy older performance musicians (PMs) who received music education from kindergarten through college. Although gerontology specialists and inter-disciplines have spent 70 years investigating music on non-musicians (NMs) to improve their wellness, this study explored neither NMs nor topics related to them. Specifically, this researcher was unable to find compelling qualitative literature on PMs to compare with NMs. Therefore, this study explored the role of music in PMs' lives, and the values and beliefs that motivated them to sing, play instruments, compose, and conduct to sustain music competencies in community performances.

Values and beliefs were the framework for designing interview questions to discover participants' motivations to sing, play, compose, and conduct music in social settings. Participant narratives revealed music identities and values and beliefs (Dolfsma, 1999) motivated their decisions. To the first research question, *What is the role of music among PMs?* The answer was "music is life," (non-payment) and "music is life and a livelihood" (payment and non-payment).

To the second research question, *What motivates PMs to sing, play an instrument, compose, and conduct music over the course of their lives?* First, PMs chose knowledgeable conductors who selected challenging repertoires that showcased and sustained music competencies, and continued music learning (Stebbins, 1992). One point to address is that many vocal participants' assessed their music competencies at "advanced"; however, based on repertoires performed, the participants would be judged as "expert." A subtheme of emotional memories confirmed composers do intentionally construct musical elements to evoke emotions and imagery from listeners (Bonds, 2006). Second, PMs chose ensembles and venues that showcased their music competencies (Stebbins, 1992). Third, PMs chose camaraderie and relationships that became lifelong and meaningful (Veblen, 2007). Last, PMs travelled to bring new and treasured repertoires to international communities that deepened their social connectedness to humanity. Therefore, music identities, values, and beliefs were at the core of PMs' decision-making to choose to participate in community music.

There were three psychosocial theories chosen to inform the research. First, Maslow's (1943a, 1943b) motivation theory was a good fit because PMs did self-actualize new music competencies that supported healthy cognition, relationships, and wellness. Second, Atchley's (1971, 1989) continuity theory fit PMs because they maintained activities they adopted in younger years to remain physically and mentally healthy, but made adaptations to the normal aging process by increasing exercise routines, wearing hearing aids, and lowering vocal ranges. Third, Rowe and Kahn's (1987; 1997; 1999; 2015) activity theory fit PMs because they reported being mentally and physically healthy by active engagement in music performance, which associated with camaraderie and relationships. Therefore, these theories were applicable because PMs were motivated to maintain their wellness to perform community music.

One final topic to emerge from this study worth adding to the base of knowledge in qualitative literature is the amount of time toward practice and rehearsal. Wagner (2006) reported virtuosos spent at least eight hours per day rehearsing to maintain music competencies. This study revealed conductors and music educators, having expert to virtuoso competencies, spent an equal amount of time and sometimes more time practicing and rehearsing than Wagner's (2006) virtuosos. This study supports Hartley's (2006) study that music educators should be teaching all age groups toward community music, which would support lifelong learning of music and wellness through the life course.

### **Conclusion**

Overall, the phenomenological narratives illustrate that the role of music is (1) a summons to perform, (2) the combination of knowledgeable conductors and their choices of challenging repertoires that showcases musicians' music competencies; music that builds on existing skills through the life course, and the by-product of repertoires that evoke emotional memories to PMs and their listening audiences by composers' intentional use of musical elements, (3) the promotion of camaraderie, and relationships, and (4) socialization by travelling internationally to perform.

Therefore, two topics emerged from this study to build a base of knowledge in qualitative literature: (1) the confirmation that composers create musical structures to evoke emotions and imagery to PMs and their listening audiences, and (2) travel promotes socialization, whereas the topics of conductors, repertoires, camaraderie, relationships, and socialization fill the gap in qualitative literature.

This study had five music educators among the participants, which suggest an area of new research on the importance of music education in community music careers for the older

population. A limitation to this study was scheduling committed PMs in the narrow time frame for the study, especially instrumentalists. Therefore, time is of the essence for PM scholars to collaborate with applied gerontologists, who study the aging process, to discover the effects of lifelong community music participation in healthy aging and quality of life. In all, PMs enjoyed the benefits of purposeful music making and strong social networks. In essence, this study respects the values of music that mirrors the spirit of performance musicians and their contributions to culturally enrich the American society.

## CHAPTER V. THE ROLE OF MUSIC AND WELLNESS

### Abstract

The purpose of this qualitative study was to explore the role of music on wellness in the lives of healthy older performance musicians (PMs) having advanced, expert, or virtuoso competencies. The phenomenological approach included seven demographic and three semi-structured interview questionnaires from a convenience sample of 18 PMs who performed by singing, playing instruments, and composing music. Dominant themes emerged on community music participation by physiological, intellectual, emotional, and sociological dimensions of wellness. All 18 PMs were aging well to maintain regular participation in community music. PMs' narratives provided evidence that their music identity was motivated by values and beliefs of good health for lifelong community music participation, which suggests there is a corollary effect of lifelong music education that promotes wellness, quality of life and longevity.

**KEY WORDS:** wellness, healthy aging, older performance musicians, applied gerontology

In Western nations, life expectancy has increased from 47 years to 80 years due to decreases in acute illnesses and mortality (Population Reference Bureau, 2002). The result is millions of adults living an additional 30 to 40 years (Population Reference Bureau, 2013). As the older population increases due to the Boom generation's retirement, the role of music will reveal whether learning music will sustain wellness through the life course (Colucci, 2014; Kim, Fridgeon, & Kim, 2014; Schwadel, 2011). Unfortunately, there is scarce qualitative literature on performance musicians (PMs) because gerontology specialists have used a music model for non-musicians (NMs) as an intervention to treat pain, anxiety, and depression.

## **Background**

For decades, PMs' storied lives have rarely appeared in qualitative literature, but narratives are relevant to understand better the association of music on aging (Cohen, Perlstein, Chapline, Kelly, Firth & Simmens, 2006, 2007; DeVries, 2012; Hanna-Pladdy & Gajewski, 2012; Holmes & Holmes, 2013; Solé, Mercadal-Brotons & Gallego, 2010). In past decades, the focus of researchers has been NMs living in long-term nursing homes (Abdellah, 1988; Goddaer & Abraham, 1994; Karras, 1987; Schweinsberg, 1981; Spitzer & Coutinho, 2014) because researchers were hopeful that music could remediate chronic diseases and dementias. The same focus applied to NMs living in communities needing interventions for chronic diseases and dementias (Creech, Hallam, Varvarigou, McQueen, and Gaunt, 2013). Hays (2005) said, "Music can be justifiably regarded as a branch of preventive medicine" (p. 28)...for some older adults, singing or playing their musical instruments, maintained music competencies, "muscle tone, increased cardiovascular strength, and better respiratory functioning" (p. 30). People achieve wellness by making conscious choices to ensure healthy aging. Although gerontology specialist researchers have sought to slow down or reverse diseases by music without success, there is evidence that music promotes wellness (Bowers, 1998; Hays & Minichiello, 2005; Joseph & Southcott, 2014; Skingley, Martin, & Clift, 2015). However, there is a new trend among some gerontology specialists to know the preventive practices of aging PMs; and some applied gerontologists (non-medical) are now focusing their research on healthy aging.

### **Wellness Among Aging Performance Musicians**

Hettler (1976) created the holistic model of wellness for health educators to help people integrate seven dimensions of wellness into their daily lives: physical, intellectual, emotional, spiritual, social, environmental, and occupational. Since 1976, many researchers and industries

have included additional dimensions in Hettler's wellness model. Pierce (2012) explains that the time has come to incorporate a health and wellness model into music education curriculums because studies show musicians are at high risk of physical and psychological injuries at some stage of their lives. Of particular risk to musicians' wellness are hearing loss and neuro-muscular-skeleton injuries (i.e., brain, spinal cord, nerves, muscles, tendons, ligaments, tissues, bones), which agrees with educational directives released by the National Association of Schools of Music who recently partnered with the Performing Arts Medicine Association (NASM-PAMA, 2014).

What motivates PMs? Maslow (1943a) believed that when people meet their physiological and safety needs, they were motivated to pursue higher levels of human needs of relationships, self-esteem, knowledge and understanding, aesthetics, and self-actualization. Maslow (1943b) said, "A musician must make music, an artist must paint, a poet must write if he is to be ultimately happy. What a man can be, he must be. This need we may call self-actualization" (p. 382).

### **Music Can Be a Benefit or a Risk to Wellness**

After 1991, pioneering neurology studies used functional Magnetic Resonance Imaging (fMRI) technology, which identified the nexus between cognitive functions, mood, emotions, behaviors, and health by musically stimulating the brain's chemical neurotransmitters dopamine, serotonin, and noradrenaline (Chanda & Levitin, 2013). Herholz and Zatorre (2012) reported fMRI demonstrated music training is a whole-brain acquisition that affects the brain's neural pathways of neurotransmitters. As music stimulates the heart, it releases a maximum of oxygenated blood to the brain arteries. Under fMRI, both brain hemispheres are lighted in certain regions, which demonstrates the effects of oxygenated blood and the release of dopamine

(emotions) (Herholz & Zatorre, 2012), serotonin (emotions, mood) (Rohrmeier & Rebuschat, 2012; Chanda & Levitin, 2013), and noradrenaline (mood, and emotions) to the brain (Lundbeck University, 2014). Many researchers reported dopamine, serotonin, and noradrenaline regulate ‘feel good’ emotions (Chanda & Levitin, 2013; Chudler & Bergsman, 2014; Mitterschiffthaler, Fu, Dalton, Andrew, & Williams, 2007).

Whether the environment creates the union of rhythms, melodies, and harmonies or musicians create them, the “music of life” (p. 148) can either help or harm the human anatomy (Hutchison, Covan, & Bogus, 2012). Because the human brain and body depend on speech, rhythms, and sound tones to function optimally, parents and music educators are strongly encouraged to provide children with protective hearing devices and instructions for practicing, rehearsing, and performing music to prevent hearing impairment. Though otolaryngologists know music stimulates brain activity, they also know uncontrolled sound intensity above 85 decibels (dB) reduces hearing sensitivity. Bauman (2010) reports audiologists use audiogram graphics to show patients where minor hearing loss is evident: normal hearing is from -10 to 15+ dB, a minor hearing loss is from 16+ to 25+ dB. However, hearing loss becomes more noticeable from moderate to profound loss: a minor-to-moderate hearing loss is from 26 to 40 dB; a moderate loss is from 41 to 55 dB, a moderate-to-severe loss is from 56 to 70 dB, a severe loss is from 71 to 90 dB, a profound loss is from 91 to 119 dB, and deafness is at 120 dB.

The Occupational Safety and Health Administration (OSHA, 2016) established noise exposure standards to 85 dB (loudness); sound over 85 dB requires protective hearing devices. It is speculative why OSHA has not established industry standards for musicians from childhood to old age (Emmerich, Rudel, & Richter, 2008) or has not produced public awareness campaigns of the risk to health by untreated hearing loss. Therefore, the responsibility of teaching lifelong

prevention of hearing loss belongs to parents and music educators (Chesky, 2011) so that children's behaviors are shaped from the beginning of learning music to protect their hearing by wearing hearing devices during practice, rehearsals, and performances. When children begin learning a musical instrument, they should be wearing protective hearing devices, and taught that hearing protection is a lifelong practice. Researchers (Palin, 1994; Etymotic Research, 2016) reported protective hearing devices are requisite for musical instruments that produce sound over 80 dB (i.e., viola, violin, bassoon, oboe), over 90 dB (i.e., clarinet, Euphonium, French horn, mellophone, timpani), and over 100 dB (i.e., alto saxophone, bass drum, cymbals, flugelhorn/bugle, flute, piccolo, snare drum, tenor saxophone, trombone, trumpet/cornet, tuba/contrabass). As Strasnick et al. (2007) reported, profound deafness is at 120 dB; therefore, protective hearing devices must also be worn during symphonic concerts for protection against the music peak (120-137 dB), and Rock and Roll music peak (150 dB), and anyone sitting from four to six feet from the source of sound (120 dB). Because of the absence of public and private awareness campaigns to instruct musicians to wear protective hearing devices during practices, rehearsals, and performances, it is crucial that parents and music educators take the leadership role in educating musicians to wear protective hearing devices; this applies to all ages.

### **Purpose Statement and Research Question**

Little is known about the effects of music on PMs' wellness; hence, there is a base of knowledge missing and a wide gap in research on the phenomenon of PMs. Therefore, time is of the essence for applied gerontologists to solicit PM scholars to collaborate in research with PM participants to discover the effects of lifelong community music participation to sustain wellness.

The purpose of this study was to discover whether community music participation promotes wellness. This study investigated PMs who began music education in childhood and

developed music competencies to advanced, expert, and virtuoso as vocalists, playing instrumentalists, composers, and conductors. The research question that guided the study was *Does participation in community music contribute to wellness?*

## **Methods and Procedures**

### **Approval**

The university's Institutional Review Board (IRB) approved this study. All participants received the Informed Consent form, and consented to having their interviews recorded for verbatim transcription.

### **Participation Criteria**

Participation criteria focused on PMs who were (1) age 50 and older, (2) living independently in a U.S. community, (3) either singing, playing an instrument, composing, or conducting music (4) either musically educated in K-12 and/or college, or private tutoring, or self-taught, (5) having music competencies of advanced, expert, or virtuoso, (6) regularly participating in community music, (7) having had audiology screening (or hearing aid treatment) within a two-year period, or volunteering to a simple piano hearing/singing test in participants' vocal singing range, (8) not consuming antidepressants for the treatment of depression, alcoholism, anxiety, and dementia – antidepressants are synthetic neurotransmitters, which counteract natural neurotransmitters from releasing to nerve cells (Kavalali, 2014; Gu, Wang, Yuan, Guo & Huang, 2015), and (9) not physically impaired to prohibit either (a) standing on risers with other choral singers or (b) sitting with instrumentalists in orchestral, symphonic or band sections to perform.

## **Recruitment**

Participants were recruited using the purposeful snowball sampling technique whereby community music directors were contacted to help recruit PMs who met the selection criteria. The recruitment materials were sent to potential participants. These volunteers were then emailed an informed consent letter and interview questions. In addition, the researcher's PM acquaintances and faculty member referrals were recruited using the same materials. Overall, participants were recruited from seven regions of the US from September 2015 to March 2016. Of the 21 potential participants, three were exempted for either untreated hearing loss or consumption of antidepressants. No monetary or gift incentives were offered to participants for volunteering to participate in the study.

## **Research Approach and Research Question**

A phenomenological approach was used by asking semi-structured interview questions that sought to discover the role of music in PMs lifetime of experiences. Table 5.1 shows the seven-item demographic questions and three semi-structured interview questions. These instruments were pilot tested among non-participating PMs for validity and time duration; both qualified. The research question that guided the study was, *Does participation in community music contribute to wellness?*

Table 5.1

*Demographic Questions and Semi-Structured Interview Questions*

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Demographic Questions
<ol style="list-style-type: none"><li>1. What is your gender?</li><li>2. What year were you born?</li><li>3. What is your marital status?</li><li>4. What is your race/ethnicity?</li><li>5. What is your highest level of education?</li><li>6. What year did you achieve your highest level of education?</li><li>7. What is your employment status? <input type="checkbox"/> F-T <input type="checkbox"/> P-T <input type="checkbox"/> Retired <input type="checkbox"/> Other</li></ol>

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Semi-Structured Interview Questions
<ol style="list-style-type: none"><li>1. Can you explain how your participation in community music has helped you to age well? Or doesn't music participation help you to age well?</li><li>2. What adaptations have you made to your participation in community music because you are growing older?</li><li>3. What personal benefits do you gain in participating in community music?</li></ol>

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**Data Collection**

Administered either face-to-face or by telephone, interviews ranged from 45 to 90 minutes.

**Analysis**

Because the author is a PM, her bias as an “insider” was made known to the participants. Any preconceived notions (bias) were set aside during data collection, transcription, and coding for validity and analysis. Further to qualitative trustworthiness, the researcher’s reflections of participants’ answers were recorded in memos and journals (called reflexivity or bracketing [ ]), and combined with participant transcripts to remove conjecture, so that evidence emerged on the phenomenon of PMs lifetime experiences in community music participation (Hays & Singh, 2012). All transcripts were typed verbatim, then aliases assigned to each PM to protect their

identity. Next, transcripts were coded into themes and subthemes generated by Atlas.ti 7.5, a software application that is used extensively among qualitative researchers (Prieto-Flores, et al., 2010; Bacsu et al., 2012). The interpretation process used a narrative structure to humanize the storied lives of PMs and the researcher's life views, which is the norm in qualitative research.

### **Findings**

Before proceeding into the dominant themes, it is important to mention that values and beliefs were built into the interview framework. Dolfsma (1999) believed musicians' music identity determined their values, and beliefs. If that is true, then music identity might explain the participants' motivation to maintain participation in community music to age well, make adaptations to continue participation in community music, and gain personal benefits from participation in community music. The findings of this study help build a base of knowledge on the research questions relevant to the contribution of community music participation to wellness.

Revisiting the seven-wellness dimensions, this study shows four dimensions emerged from the participants' narratives: physiological, intellectual, emotional, and sociological. Furthermore, under the emotions dimension two subthemes of attitudes and passions emerged that suggests the participants were aging well by refining their views of aging.

#### **Aging Wellness and Participation in Community Music**

Participant narratives were nearly divided between physiological and intellectual dimensions of wellness.

***Physiological.*** The physical wellness dimension includes healthy behaviors such as nutrition, exercise, sleep, annual medical assessments, and avoidance of unhealthy behaviors such as excessive alcohol, multiple sexual relationships, and illicit drugs. In analyzing narratives,

it was difficult to discern which came first: being physically healthy to age well, or being physically fit for the love of performing music. This is shown in the following examples:

I'm an epidemiologist and I know how *hard* it is to establish an interrelationship between any part of a lifestyle as behavior and health. Jazz is a counter corollary effect...blowing a horn is good for you, it's a stimulus to playing music and participation is good for you.  
[George]

My health...people tell me that I look younger now because the stress is gone. [Michael]  
Oh, I think it has helped. I think psychologically and emotionally, it is an important part of your physical structure. I just love it. I look forward to it. It's something that I do. It's part of my daily life, week life; so I feel it's been very beneficial. It makes you be aware of good breathing, keeping yourself strong, and your cardio-respiratory system. I'm actually strong for age 73; I'm in pretty good shape. I do a lot of work around the house, I walk, lots of things like that. [James]

It certainly has contributed to aging well. I'm very health conscious, very diet conscious, very physical conscious; and all those things play an important part in my daily life. I've swam...I do other kinds of [exercise such as] dance and I know what that's doing for me, and knowing what I'm eating and knowing what I'm not eating. I kind of know what that's doing for me. [Deborah]

I think it's [music] helped me age very well. I think it's certainly helped my respiratory system stay healthy and strong. I think I probably take better care of myself because I know I'm going to be in front of an audience...vanity, plus being useful-minded. [Jan]

As far as my physical health, in terms of a holistic approach, the music can be meditating and so it's a stress reliever...and physical to strap on several instruments and walk

13 blocks in New York...and up and down subways...whatever it takes. [Mark]

I think it [music] does have something to do with aging well. For one thing, it's a good physical fitness for me. I need to go to the gym regularly except for when I'm conducting in concerts, and then I don't [go to the gym] at all because I'm getting [physical] activity.

I think it's [music] helped me age fairly well...cardiovascular, brain, and overall for sure.

[Phillip]

These narratives reveal participants' music identities, values, and beliefs of being committed to physical fitness for participating in community music. These findings strongly suggest there is a synergistic effect of health and music. One needs to be healthy in order to participate in music; and the corollary is that music provides the reason to be healthy.

***Intellectual.*** The intellectual wellness dimension includes higher order abstract thinking, humor, curiosity, interest in worldly ideas, learning and mastering skills to protect brain health. A familiar narrative among participants was the enjoyment of learning unfamiliar, diversified, and cognitively challenging repertoires.

...it pushes me a little bit, physically, to come home from a day of doing ordinary things and then spend three hours of very solid concentration in our [ensemble]...that does take a lot out of you. And I think it's good for me...I have to push myself a little bit. [Carol]

I think it's helped me mentally to be engaged in so many different genres of music and the levels of difficulties of music...it keeps my brain working. [Lillian]

There's a certain skill you develop for sight-reading...just being able to look at music and take it all in real quickly...the notes, the rhythms, the dynamics markings, all the

extraneous markings...it helps with your concentration. ...It sharpens your mind in a certain way that you don't get in your normal life otherwise. I'm a much better sight-reader than I was when I started, and it doesn't take long for me to get back up to speed after a long break as it used to. I believe that in certain ways I have maintained mental structures because of the skills of reading music. [Margaret]

I think continuing to learn new pieces on a regular basis helps to age well.... [Rachel]

I think being interested in the world keeps you young. And I'm a man and curious...I'm curious in everything, always have been...always wanted to know everything, always wanted to do everything.... One of the things that kept me from being an expert at anything is, I was too enamored of all disciplines to restrict myself to one; it's a blessing and a curse depending on your goals in life. [David]

I suppose it [music] has some effect as it gets one out of the house, and there's a certain need to concentrate and probably better than playing a crossword puzzle, especially studying a new piece that challenges your eyes, ears, and coordination skills have to be a part of that. So I think kind of a mental game insulates you from Alzheimer's from BSF [benign senescent forgetfulness]...forgetfulness. [laughs] [Nicholas]

For this fall I did a piece called *Cantata Criolla* by Estevez, a Venezuelan piece...all the Europa dance rhythms. It's kind of Venezuelan's national piece...they take pride in it because it's the Devil arguing with The People and it's based on their love of singing, actually. It's only been performed four or five times in this country with modest success because it's so dang hard...the orchestral parts are fifteen-sixteenths and seven-sixteenths and go back and forth in two-fourths [mixed meters]...it's just a *hard* rhythmic piece. I

always look for pieces every year in our programming that are going to make me have to concentrate more; I think it's good for me, so I search those pieces out. [Phillip]

Overall, narratives indicate that cognitive health is a considerable motivator to lifelong learning of music to prevent cognitive decline. Indeed, narratives indicated participants placed a high value on lifelong learning of music by challenging repertoires, which satisfied achievements of self-actualization.

***Emotional.*** The emotional wellness dimension is one's self-esteem, self-confidence, self-acceptance, self-efficacy, and ability to share one's feelings with others. A few participants believed one's attitude determined wellness such that if one did not have a passion for music, then one would not be so inclined to participate in community music over a lifetime.

I think music... a good attitude is extremely important. [Frederick]

I'm a pretty happy person, my doctor says I'm in good health. [Douglas]

Music is one of those things that has taken me through my life. I think when you're connected to your youth, it has a more prominent place in your life, therefore, you stay more youthful because you've kept your youth with you. ...I'm playful, I like to play. I love humor, I love being humorous... being around people that're humorous. I think all those things keep you young. [David]

These few narratives suggest that a healthy attitude, contentment, and playfulness of spirit are shared value systems of one's culture and society. These would not be present without a passion for music.

***Sociological.*** The social wellness dimension included learning and developing communication skills to make meaningful connections with caring people – family, friends, neighbors, and community members. One participant recognized the importance of accepting

aging as a process, but valuing aging as a time to contribute to camaraderie and socialization among multiple generations by participating in community music.

I'm not even sure. I would have to say that perhaps I am possibly better well adjusted, and maybe at some age other than just old and does nothing. I say socialization and having that kind of camaraderie is essentially, as one gets older, very important. I'm always making connections with people that are 20 and 30 years younger than me.

[Russell]

### **Adaptations Made to Participate in Music**

Participants mostly focused on physiological wellness when they made adaptations. For some participants, narratives indicated adaptations to promote physical wellness was important to continue community music participation such that daytime naps, sitting during long concerts, changing meal time schedules for late-night concerts, and changing nutrition and exercise routines were important to ensure longevity.

*Physiological.* As mentioned above, the physical wellness dimension focused on promoting healthy behaviors. Participant narratives suggest that despite sensory adaptations to vision, hearing, and muscular-skeletal symptoms, such aging changes did not disrupt their quality of life to participate in community music.

I believe early on in my life it [music] didn't contribute to my health just because of the lifestyle associated with it. ...I did sober up in 1984 due to participation in a recovery program, so I'm healthy because of that and it [music] has allowed me the freedom to participate in community activities.... I exercise for cardio to get my heart rate up for about a half hour or so each day on a bike or rowing machine. [Frederick]

...I'm not as agile, but as I age I need a knee replacement; so far I haven't needed to hire somebody to haul the equipment. ...I walk a lot. Anytime you do a gig, you have to stand a lot, and I'm standing from two to four hours usually, so it keeps me moving and it keeps my brain well. [Douglas]

...By adaptation my wife has to drive me because I don't like to drive at night...I've turned down lots of routines, gigs. [George]

Physically, it keeps my vocal folds lubricated. Going from a first soprano to a second soprano, because of my range lowering I think to age. ...As my range naturally changed, I just accepted it. [Lillian]

I do sit in the front row rather than stand for long works, that's the only thing I've had to do. [Carol]

...I started taking singing lessons seriously. ...I was beginning to get hoarse after each rehearsal, and that was very bad...it's extremely challenging, it's very difficult for me shedding old habits and trying to implement new techniques...very frustrating. [Jane]

I sit up front to perform because it is physically tiring to perform since the aneurism. [Rachel]

I've actually changed my diet. I used to drink pretty heavily. I don't drink anymore because my doctor told me about five or six years ago that if I didn't stop, I'd have a stroke. I do breathing exercises; I always exercise before a long rehearsal or performance. If I need a nap, or additional exercises, I'll do that because most of our performances are late at night. I'm keeping my voice clear and voice strong, and just my whole physique and I'm conscious of that ... as we get closer to performances I become more

conscious...I change my diet like when I eat and that kind of thing before performances.

[James]

I would say what comes to mind is certainly on rehearsal night, which is once a week, and performance week is almost every night of the week. I try to rest up a bit in the afternoon before rehearsal. Because I know I've got to go and give three hours, plus about a 45-minute drive each way, I've got to make sure that I've got that energy. A few years ago, I wouldn't have given it a second thought. The hearing aid, which I've been really bad about putting in, but I'm going to start to use it more because *I'll find* that I won't have a problem with the music, with the pitches, intervals et cetera... *what I'll miss* are some of the comments being made by the conductors. In terms of just resting up before rehearsals, I think that's fair, but in terms of when I'm there [rehearsals] and feeling the process of getting it [sight-reading and singing] is slower [mentally and physically]...nuh-uh. I feel just sharpened, and in some cases sharper, because like I talked about before of all the experience...the years of *doing it*. [Deborah]

...I lowered the key I sing in...ha, ha! [Jan]

I have one hearing aid, but I use more caution when I drive a car at night by using the many adaptive features in the car. [Nicholas]

I don't think I have the breath control that I used to have. My fingers are a little thicker and are not as agile...I try to balance the degrading physical skills with wisdom. But singing has definitely helped my cardiovascular health. I've noticed a lot of times I'd go to rehearsals and maybe I had a headache or just felt tired, but when I got out of rehearsal, I really felt invigorated...there's a lot to be said about deep breathing. [David]

I don't have the lungpower that I used to have 20 or 30 years ago when I started singing choral. So I find myself singing shorter passages to support my breath better...I will attempt the longer notes. Up until June of this year, my wife and I were overweight and we decided it was time to get into shape. In the last six months, we've both lost about 50 pounds each. It's really a change...it's amazing what it did for my esteem. I can hold a note longer now...I'm not as out of breath like I used to be. We did a lot of walking to get healthier anyway, but I'm not breathing as heavy or as hard as I used to after giving a concert. I have more stamina...getting into shape was wanting to sing better, but a lot of it was I want to live a lot longer. ...I have a cataract forming on one eye and have an examination in January to see the progression. [Russell]

Participant narratives evidence acceptance of the aging process, but when adaptations arose, participants chose appropriate actions to ameliorate their conditions.

***Emotional.*** The emotional wellness dimension as explained earlier is one's sense-of-self, and how trusting one is to share feelings with other people. Here, two participant narratives explain how perseverance to adverse conditions protected their emotional wellness.

A couple of years ago I was diagnosed with depression. I didn't know what was happening, and then I said, "Wait a minute, let's look back in my past life when I had some good times when I was singing with groups!" So, that's how I got back into music, by listening to that little voice inside of me...it [music] defeated depression. ...I had a hip replacement about four months ago. I think the adaptation would be standing for 45 minutes in one spot, and I can do that because the conductor can go on for at least an hour at a time. [Charles]

...My health has improved dramatically doing music that I enjoy that I find worthy as opposed to what I was instructed to do; there's a difference...what I choose to do, or choose to participate in or find value in, that's a health issue. [Michael]

These narratives suggest participants were emotionally mature to observe and arrest situations that imbalanced and challenged their sense-of-self and music identity.

***Overlapping Dimensions.*** Some participant narratives overlapped wellness dimensions to explain adaptations to participation in community music.

I come in with my genetics, which are very strong toward health and longevity...psychologically, mentally, emotionally, socially, yes, it's [music] helped me in all those areas. Physically you have to maintain your instrument...make sure everything is working and your health, and mentally it's [music] a wonderful challenge...and emotionally just connecting with the music that can connect with fellow singers...the orchestra all coming together is, for me, just emotionally a high. [Jane]

Oh, I think it has helped. I think psychologically and emotionally, I think it is an important part of your physical structure. I just love it. I look forward to it. It's something that I do, it's part of my daily life, week life, so I feel it's been very beneficial. It makes you be aware of good breathing, keeping yourself strong, and your cardio-respiratory system; I'm actually pretty strong for age 73, I'm in pretty good shape. I do a lot of work around the house, I walk, lots of things like that. [James]

I've had to make some physical [adaptations]...I think emotionally it becomes deeper...I think intellectually I've become more sophisticated because music has that power to bring sophistication, and to bring emotional maturity as well. But I've had some physical problems with my arthritic hands, and I've had hand surgeries. I tore a bicep tendon last

year exercising but I think music keeps that going. ...I have a great hand and arm surgeon. I've got one more hand surgery that we know of...my left hand. I can get it around the wrist and the thumb...that bone on the outside if you look at where the crease is between your forefinger and your thumb and go down toward your wrist...that bone there grows on me and becomes arthritic and makes my hand not let me use my thumb. So he took the bone out and put some cartilage in there and new tendons in the right hand and it's 100% now. So, he's going to do my left hand in a year or so...he's a wizard and the best in the world, I'm convinced, and other people think so, too. [Phillip]

These overlapping narratives suggest that despite injuries over a lifetime or aging, that participants were committed to sustaining music competencies and performance.

### **Personal Benefits to Participate in Community Music**

Participants reported emotional wellness was the most important personal benefit to participating in community music, followed by the personal benefit of physiological wellness, whereas intellectual and sociological wellness were tied as the least important benefit.

*Physiological.* A few participants reported personal benefits of physical wellness enhanced their music competencies, sustained youthfulness, and maintenance of cognitive simulation.

So my physical health is enhanced by singing and standing and keeping my body well enough to get through the night whether practice, rehearsals, or performances. [Charles]  
I definitely feel it [music] keeps me young and keeps me stimulated. I still play daily, and regularly. [George]

Well, I think proper breathing carries over into my life. [Deborah]

***Intellectual.*** Two participants valued intellectual wellness as personally beneficial to participating in community music by maintaining mental acuity and knowledge of composers' works.

...It [music] does keep me active in rehearsing like keeping the mind sharp.... I like practicing as much as performing sometimes.... [Frederick]

...I am expanding my mind with the different types of music and composers' works that we perform, which gives me a greater understanding and enjoyment of music in general.... [Jane]

***Emotional.*** A few narratives provided evidence of emotional wellness: zest for living, validation of one's feelings, pursuit of passions, and self-esteem are personal benefits to participating in community music.

...I think it's just the interest and the passion for it [music], but it has good health benefits. [Douglas]

I think one of the things I'm aware of is my ego is enhanced. Several people have come up to me and said, "I never knew you had that capability." So it's satisfaction that other people recognize it. [James]

*Oh, the joy! The fun! I love it!* It's something I look forward to...it's [rehearsals] probably eight hours a week...I don't do that much additional practicing at home...the choral music is pretty easy for me to sight-read. [Carol]

Oh, I've got too many to count...[music] it's validation, of course, my sense to other people's reaction to my music, and my writing and my voice, and my playing. When somebody says it was important for them for some reason, whatever that major purpose...that's the biggest [benefit] right there. [Jan]

Music is a natural anti-depressant...it's anti-anxiety...not that I'm plagued with either of those things, but I tend to be more self-introspective, self-reflective a lot; so, I think music takes me out of myself. [David]

***Sociological.*** Similar to the emotional, intellectual, and physiological benefits of participation in community music, sociological benefits of wellness emerged on the connection and meaning of relationships, camaraderie, and socialization because of shared experiences in community music participation.

...the affirmations that you know you're giving people, a religious experience sentiante, where they find it strikes a chord with them spiritually, mentally...that's a very hospice thing...it's reaffirming to you that you're on the right track. [Michael]

It's good to do things with other people especially since our nuclear families have disintegrated over the last two generations. Where we all used to be very connected to a lot of people, now we're very unconnected. I think music is one of those activities that keep you plugged in. [David]

Mainly the mental health thing...just the singing with everybody, and singing those chords...to me that's such pleasurable sounds...just listening to that music just gel. So I think in just having that social atmosphere, we all have the same thing in common to talk about it or having a glass of wine afterwards. [Russell]

It [music] just has a built-in social network that's provided, that without music I would have to connect intentionally with social communities in another form. [Mark]

***Overlapping Dimensions.*** Five participants cited multiple dimensions of wellness as personal benefits to performing music such as physical fitness, healthy nutrition, and intellectual energy.

I don't know how to explain the benefits except that it [singing] is something I have to do. I ride a bicycle. I actually compose on that bicycle because when you're doing a long-distance trip, for example down the coast of California, and you're with 10 or 11 people, you're really spread out and most of the time you're by yourself. ...I had to memorize some Spanish for some songs that I had right in front of me.... I'll sing no matter what and appreciate my voice. [Lillian]

I really think that it [music] has helped along with nutrition and exercise. It's something I can turn to...listening to music is validation for whatever I feel at the time...a certain mood for different kinds of music. If I'm feeling blue or sultry or energetic or nostalgic or whatever, hearing the music that goes with the mood is so gratifying, it reinforces the emotions. [Margaret]

Whatever time I put into my music on my own and in rehearsals and concerts all culminate to aging well...I like to see an outcome for my efforts. [Rachel]

I think it's intellectual vitality. I think everyone brings their own emotional vitality and emotional energy but just participating...I have people in my choir who I *know* that this is one of their best outings of the week. I know seven or eight physicians in the [ensemble] right now and they all say that this is one time in the week that they can turn on a different part of the brain, have someone else make the decisions for them, and the music is complicated enough that they have to completely submerge themselves into that, and they cannot think about their problems and other such things...and that applies to me, too. [Phillip]

These narratives evidence the values, beliefs, and personal benefits of music among 18 participants who are aging healthfully, which suggests a corollary effect of community music participant on four wellness dimensions.

### **Discussion**

This phenomenological study explored the wider issues of the effects of music to wellness. Because Americans are enjoying up to 40 additional years of life (Population Reference Bureau, 2013) many healthy older adults choose community music participation as an activity. In the current study, participants were either solo artists or members of small to large ensembles who began music education in childhood and developed music competencies of advanced, expert, and or virtuoso skills. Our research shows that music identity determined PMs values and beliefs to maintain their wellness for community music participation; this compares favorably with Dolfsma (1999). This study agrees with Hays (2005) in that singing and playing instruments maintains cardiovascular functioning and several domains of wellness. Likewise, this study agrees with other researchers (Bowers, 1998; Hays & Minichiello, 2005; Joseph & Southcott, 2014; Skingley, Martin, & Clift, 2015), that music promotes wellness.

Most PMs reported that community music was the reason they enjoyed wellness, which was a core priority to sustaining their participation in community music. However, it is problematic to discern whether their desire to be as healthy as possible for improved musical performance, or whether musical performance contributed significantly to the improvement of several dimensions of wellness.

Although a few PMs wore a hearing aid, 12 PMs reported they did not have an audiology examination in the past two years. To prevent hearing impairment, it is imperative that all PMs protect their hearing with protective hearing devices or wear bidirectional hearing aids during

practice, rehearsals, and performances. Furthermore, by midlife PMs should have their hearing examined by audiologists every one or two years to prevent hearing loss that is associated with 70 known chronic diseases and dementia (Strasnick, Antonio, & Hoffmann, 2007).

A limitation to this study was the small number of participants. It was difficult scheduling interviews with committed PMs in the narrow timeframe of the study. Additional participants who play instruments would have provided a greater diversity of PMs and competencies. Suggestions for future research would be to include questions concerning audiology in the interview, and to expand the research teams to include licensed music educators, performance musicians, audiologists and applied gerontologists for the benefit of both older and younger cohort participants.

### **Conclusion**

Of the many community activities available to healthy older adults, community music venues (i.e., choirs, orchestras, symphonies, and bands) offer personal benefits of wellness and quality of life. Wellness is fundamental to community music participation, especially the demands of expert to virtuoso competencies. This study provided evidence that PMs need and want the challenging repertoires to sustain existing music competencies as well as developing higher competencies to challenge higher order brain functions to accomplish the more complicated repertoires. Overall, the phenomenological narratives illustrate the role of music on wellness is chief among all PMs.

## CHAPTER VI. THE ROLE OF MUSIC AND HAPPINESS

### Abstract

The aim of this qualitative study was to explore the role of music and happiness in the lives of healthy older performance musicians (PMs) having advanced, expert, virtuoso music competencies. The phenomenological approach used three semi-structured interview questions from a convenience sample of 18 PMs who performed by singing, playing instruments, or composing music. Three dominant themes emerged on the motivators of lifelong learning of music: (1) happiness by learning new complex repertoires, (2) happiness by performing repertoires expertly, and (3) for fun. All 18 PMs were aging well to maintain regular participation in community music. PMs' narratives provided evidence that learning music results in happiness, not learning for happiness.

**KEY WORDS:** lifelong learning of music, happiness, older performance musicians, aging, applied gerontology

Since 1900, Western civilizations' life expectancy increased from 47 to 80 years (Population Reference Bureau, 2002), which means millions of adults are living from 30 to 40 years longer (Population Reference Bureau, 2013). After the Second World War, chronic diseases and dementias increased among the growing older population at the same time of advancements in technology and medicine. In past decades, gerontology specialists (Goddaer & Abraham, 1994; Karras, 1987; Spitzer & Coutinho, 2014) focused on music interventions to treat chronic diseases among non-musicians (NMs) living in long-term nursing facilities, whereas other gerontology specialists (geriatrics) (Creech, Hallam, Varvarigou, McQueen, & Gaunt, 2013) focused on music interventions to treat NMs living in communities. The role of music continues to be a community activity through the life course (Colucci, 2014; Kim, Fridgeon, &

Kim, 2014; Schwadel, 2011). Unfortunately, there is scarce qualitative literature on PMs because gerontology specialists have used a music model to reduce pain, anxiety, and depression for NMs. Nevertheless, there is evidence that music promotes wellness, which intersects with happiness (Bowers, 1998; Hays & Minichiello, 2005; Joseph & Southcott, 2014; Skingley, Martin, & Clift, 2015). Moreover, applied gerontologists did not investigate healthy aging until recent years.

### **Background**

While the older population continues to increase each year, their storied lives remain unheard in qualitative literature. Indeed, their narratives are important to understand the relationship between lifelong learning of music and happiness. According to Eckl (2012), music promotes health and happiness, and thereby increases longevity. For individuals who chose healthy lifestyles through the life course, community music ensembles contributed to the maintenance of physical skills (Saarikallio & Erkkila, 2007). Furthermore, older musicians who exhibit fine motor skills (Bruhn & Schroter, 2009), and increased brain grey matter, experienced long-term effects on other brain structures and functions that non-musicians (NMs) did not (Gaser & Schlaug, 2003). Therefore, Eckl (2012) suggests that PM scholars, and applied gerontologists, who study the aging process (not diseases), should be exploring expert PMs who actively participate in community music ensembles for answers to lifelong learning of music and happiness.

What motivates PMs? Maslow (1943b) said, “A musician must make music, an artist must paint, a poet must write if he is to be ultimately happy. What a man can be, he must be. This need we may call self-actualization” (p. 382). Maslow’s (1943a) motivation theory suggests that when people meet their basic human needs of health and security, they are motivated to

develop self-esteem, relationships, knowledge, understanding, aesthetics, and happiness. This research focuses on the motivations of lifelong learning of music and *happiness*. Happiness is the condition of being happy, which is “showing or causing feelings of pleasure and enjoyment” (Merriam-Webster, 2016). On the topic of happiness, Seligman (2011) developed an education and happiness model he called P.E.R.M.A., which represents “Positive emotions, Engagement, Relationships, Meaning, and Accomplishment” (p. 262) (Kern, Waters, Adler, & White, 2015). Furthermore, the P.E.R.M.A. model embodies Aristotle’s (2009) philosophy of happiness: “Every art and every inquiry, and similarly every action and pursuit, is thought to aim at some good; and for this reason the good has rightly been declared to be that at which all things aim” (p. 3).

### **Lifelong Learning of Music and Resultant Happiness**

Musicians and athletes recognize physiological principles of protecting health and wellness by avoiding injury and damage due to overuse or abuse. Vocalist PMs know that singing is anatomical: the brain thinks, and the body responds at any time and any place, that is, if lifestyle behaviors have not deformed the vocal instrument (i.e., excessive spicy foods, alcohol, smoking, screaming, etc.). Singing begins with an inhalation (respiratory) and exhalation (phonation) of human vocal sounds (NIDCD, 2015). Singing requires having good hearing (or hearing devices), nutrition, hydration, sleep, and participating in vigorous aerobic exercise to continue good health. These biological needs are necessary for the physical exertion required for breathing and singing melodic phrases without altering the original music composition (Sundberg, 1993). Vocal exercises and management of breath are requisite to sustain the center-of-the-note (Miller, 1996). Further to protecting the health of the speaking and singing voice, singers support and manage their breath from the abdomen and diaphragm to

safeguard health, happiness and longevity (Veenhoven, 2008), and avert neuro-muscular-skeleton disorders (NASM-PAMA, 2016).

Many instrumentalist PMs are vocalists, too, whether accompanying their own voices or performing in different music ensembles, but both classifications require good physical fitness for blood circulation for quality performances. Instrumentalists are also subject to neuro-muscular-skeleton disorders (NASM-PAMA, 2016) due to poor posture, but also due to no rest, excessive repetition, force, and tension that over time cause pain and injury to the shoulders, torsos, wrists, and hands (Horvath, 2014). However, by warming up, using effective practice techniques, taking frequent rests, developing stamina, and following good music technique, instrumentalists can expect good health and happiness as they age.

Over the years, some researchers (Ericsson & Charness, 1994) explored genius instrumentalists and reported music giftedness is not genetic, whereas years later other researchers (Balbag, Pedersen & Gatz, 2014) reported music giftedness is genetic; and music is cognitively challenging insomuch that older adults would benefit by lifelong learning (Zatorre, Chen, & Penhune, 2007). Moreover, according to Ukkola, Onkamo, Raijas, Karma, and Jävelä (2009), perception, processing, and creating music-making by composing music occurs in multiple regions of the brain. These different higher-brain functions are strongly linked to genetics found only in composers, arrangers, and improvisationalists that vocalists and instrumentalists do not exhibit, which these researchers say helps to explain the achievements of Wolfgang Mozart and many other music geniuses. The authors' research appears to be a new area of research that neuroanatomists could explore further and add to the base of knowledge on PM composers because there may be a correlation to low enrollments in Schools of Music and

lifelong learning, however, intellect and motivation to learn is an indication of goal learning values whether extrinsic or intrinsic (Huitt, 2011).

### **Purpose Statement and Research Question**

Little is known about the effects of music on PMs' happiness; hence, there is a base of knowledge missing and a wide gap in research on the phenomenon of PMs. The purpose of this study was to discover whether lifelong learning of music promotes happiness. This study investigated PMs who began music education in childhood and developed music competencies to advanced, expert, and virtuoso as vocalists, playing instrumentalists, composers. The research question that guided the study was *Does participation in community music contribute to happiness?*

### **Methods and Procedures**

The university's Institutional Review Board (IRB) approved this study. All participants received the Informed Consent form, and consented to having their interviews recorded for verbatim transcription. Participation criteria focused on PMs who were (1) age 50 and older, (2) living independently in a U.S. community, (3) either singing, playing an instrument, composing, or conducting music (4) either musically educated from kindergarten to twelfth grades and/or college, or private tutoring, or self-taught, (5) having music competencies of advanced, expert, or virtuoso, (6) regularly participating in community music, (7) having had audiology screening (or hearing aid treatment) within a two-year period, or volunteering to a simple piano hearing/singing test in participants' vocal singing range, (8) not consuming antidepressants for the treatment of depression, alcoholism, anxiety, and dementia – antidepressants are synthetic neurotransmitters, which counteract natural neurotransmitters from releasing to nerve cells (Gu, Wang, Yuan, Guo & Huang, 2015; Kavalali, 2014), and (9) not

physically impaired to prohibit either (a) standing on risers with other choral singers or (b) sitting with instrumentalists in orchestral sections to perform.

Participants were recruited using the purposeful snowball sampling technique whereby community music directors were contacted to help recruit PMs who met the selection criteria. The recruitment materials (i.e., invitation letter, flyer, banner, and, sign-up sheets) were sent to potential participants, and after they volunteered to participate, an informed consent letter and interview questions were emailed to them. In addition, the researcher's PM acquaintances and faculty member referrals were recruited using the same materials. Overall, participants were recruited from seven regions of the US from September 2015 to March 2016. Administered either face-to-face or by telephone, interviews ranged from 45 to 90 minutes. Of the 21 potential participants, three were exempted for either untreated hearing loss or use of antidepressants. No monetary or gift incentives were offered to participants for volunteering to participate in the study. A phenomenological approach to data collection used a demographic questionnaire and semi-structured interview questions that sought to discover the role of music in PMs' lifetime of experiences. Table 6.1 shows the three semi-structured interview questions. The instrument was pilot tested among non-participating PMs for validity and time duration, which qualified.

Table 6.1

*Three Semi-Structured Interview Questions*

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Semi-Structured Interview Questions

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1. What motivates you to continue learning music? By this, I mean what is the motivation to practice your repertoires in preparation of rehearsals and performance?
  2. Approximately how many hours each week do you practice your repertoires?
  3. Does learning music influence your sense of happiness? If yes, in what way?
-

Qualitative trustworthiness was achieved by the researcher's reflections of participants' answers that were recorded in memos and journals (called reflexivity or bracketing [ ]), and combined with participant transcripts to remove conjecture, so that evidence emerged on the phenomenon of PMs lifetime experiences in community music participation (Hays & Singh, 2012). All transcripts were typed verbatim, then aliases assigned to each PM to protect their identity. Next, transcripts were coded into the themes and subthemes generated by Atlas.ti 7.5, a software application that is used extensively among qualitative researchers (Bacsu et al., 2012; Prieto-Flores, et al., 2010). The interpretation process used a narrative structure to humanize the data of PMs storied lives and the researcher's views, which is the norm in qualitative research.

### **Findings**

The framework of the interview questions was built upon values and beliefs, which were wide-ranging and personal – they guide people throughout their daily lives, whether by sociological norms of family, government, economy, education, and religion or by genetic ancestry or regional residence or psychosocial reasons. It is useful to mention here before discussing the dominant themes, that the authors built values and beliefs into the theoretical framework. Dolfsma (1999) believed musicians' music identity determined their values, and beliefs. Thus, music identity seemingly explains the participants' motivation to lifelong learning of music and performance, which maintained their happiness. Three dominant themes emerged on the motivators of lifelong learning of music: (1) happiness by learning new complex repertoires, (2) happiness by performing repertoires expertly, and (3) for fun. To determine whether music competencies or hours of practice were predictors of happiness, participants were asked how many hours they invested per week in practice and rehearsals. In *averaging* the hours of practice and rehearsal investments, one participant could not report hours conceivably because

of worldwide travel for the number of scheduled performances in distinguished venues; eight participants reported about six hours per week, four participants reported about 22 hours per week, and four participants who were both music conductors and music educators reported 30+ hours per week – these participants parallel with Wagner’s (2006 ) study of virtuosos who spent at least 40 hours per week.

### **Happiness by Learning New Complex Repertoires**

Lifelong learning was the primary theme for 12 participant narratives.

I’m motivated in the sense of curiosity and learning. ...I get a sense of affirmation from music and to be honest with you, it’s probably a sense of identity. [Douglas]

I do the practice because I’m a man in charge. [Charles]

My role is finding the right repertoire, rehearsing with the various groups such as adult choir and hand-bell choir, and rehearsals with soloists to learn the part in the style that I want it done in. [Michael]

It’s challenging to blend with all of the voices, but if I’m at the third of the chord, I’m singing it at the right volume and just trying to make the whole chord sound wonderful. [Carol]

The desire to master the music, and be able to fully feel the emotional impact in performances is a great motivator, because I know even if I started a new piece, and I don’t like the piece, I know that by the time I get to the performance, it’s going to have meaning for me. The learning process isn’t so happy while I’m learning it because it’s frustrating at times, but the end result is that I’m *extremely* happy...I’ve met the challenge and I’m feeling the emotional impact from what I’ve learned. And the other

thing is, I want to do my best for the conductor and ensemble. The performance is actually a good goal in wanting to learn music. [Jane]

I think one of the motivations is that I still have the mental and physical capacity to do it. The second one is the personal and psychological satisfaction, and a third one is the interpersonal relationships in the chorus and orchestra. I'm very, very satisfied....

[James]

I really enjoy preparing the piece, learning the piece, reciting the piece; I get tremendous satisfaction from that. If I can tackle it, and I can get it, and *do it*, that's big for me.

[Deborah]

I'm really happy when I write a new song, or learning a new song; that gives me great joy, and it gives me joy to share with other people. So, yes, learning music does make me happy. [Jan]

Pursuing and solving a challenge is what gives me happiness and growth – new music.

Learning is a challenge and solving a problem brings a sort of satisfaction. [Nicholas]

I like challenges: I think the brain needs challenges. I'm always making up melodies, and most of what I practice is instrumental...my piano, clarinet, and recorders because Renaissance groups are primarily instrumental with some vocal. [David]

I tend to pick up the lyrics quickly, I find the notes quickly...there are so many pieces I've been introduced to; it's a sense of accomplishment and that is happiness. [Russell]

I'm the happiest when I'm making music, I know that. It's not the performance...I'm not a Drama King that likes to be on stage all the time. My happiest is when I'm practicing, and I'm a conductor so when I'm practicing with my groups, I enjoy rehearsals 10 times more than concerts...not because I get nervous at concerts, I just enjoy it more. I say to

my students, “As you practice, so you perform.... There’s no such thing as a practice, there are only performances – and sometimes people are there and sometimes they aren’t.” [Phillip]

### **Happiness by Performing Repertoires Expertly**

Happiness was the secondary theme to emerge. Ten participants reported happiness was resultant to lifelong learning of music and thus performing at a high level at expert and virtuoso competencies.

Yes, I think I’m a happier person because of my music; that I can make it, and learn it. I hope it makes me happy, but that’s not my goal to be happy-happy. Happiness is a by-product; happiness just happens. [Frederick]

I’d say learning new music makes me happier than I would be without having to do it. [Douglas]

You’re always trying to have a better sound, a better technique, better pleasing, better phrasing...so it’s to avoid disappointing yourself [laughs]...and a certain amount of recognition and pleasure coming back to you. [George]

I want to sing beautifully. I want to sing with my compatriots, and my church. I want them to do well, and I want us to do well together. [Lillian]

Personally, music has been the key that God has used to help bring me to center when I get off course or when my mind is pulled in a million different directions; then I can use music to bring my focus back to where it needs to be mentally, emotionally, and spiritually. [Michael]

I would say, yes, I like to learn something new, and then perform it... [Margaret]

Oh yes, it's fulfilling...it makes me feel good about myself...if I can perform well, that's very satisfying to me. [Rachel]

I think you have to stay physically capable to keep up with the pace...it affects your performance and attitude. From a psychological standpoint, the biggest accomplishment for me is learning Russian, Polish...that's basically how it influences my sense of happiness. [James]

I want to keep it fresh for me, and the audience; I need to have it evolve from me. I don't want to say just, "Okay, this is my set and I'm going to do this forever." I need to keep it fresh for me, and I want to keep it fresh for my fans! [laughs] I don't disappoint them in that, but I also want to bring them something new and let them know that when they come it won't be the same; not every concert will be identical. I think that's the biggest motivator. [Jan]

Just learning to increase your technical skill even at playing an instrument you love to play becomes pedantic after a while. The bottom line is the social interaction part. It makes you happy because I can have just as much fun singing ballads or difficult... [repertoires] [Mark]

Over the years, we learn that delayed gratification is the ultimate goal of a fine performance, and that involves a bit of pride that you want to continue to be good. Last night, I was working until 5:00 a.m. on Poulenc's *Organ Concerto* [G minor] and Beethoven's *Triple Concerto* [C major, Op. 56], because I want it to be good. So, it's pride and continually knowing that to get to happiness, I have to do it well. [Phillip]

## **For Fun**

Learning music for fun was a tertiary theme; although only a few participants reported that lifelong learning of music was fun. For most participants, the tone and tenor in their narratives suggested lifelong learning of music was fun.

If I wasn't having fun, I wouldn't do it. So that's what motivates me in preparation of rehearsals. I just want to put on a top-notch show that's gonna be as good as anyone is going to see anywhere else. [Frederick]

Oh, sure, because it's so enjoyable! It keeps me alert...you're learning new things and I have so much fun enjoying it...it's an upper! [Carol]

I like to achieve things, to accomplish things...it may take me a few extra steps, but when I get it down, it makes me feel good. I just enjoy doing it for the *doing of it*. [Deborah]

Music is one of the most happy-making activities on earth! It's the exhilaration of creation! [David]

All participants reported the value of lifelong learning of music in preparation of community music participation strengthened their music identity and inspired happiness.

## **Discussion**

This phenomenological study explored the meaning of lifelong learning of music and the resultant happiness. Since the 1960s, more Americans have been living an additional 30 to 40 years of life and many older Americans choose community music as an activity to make life more meaningful. In the current study, participants were either solo artists or members of small to large ensembles. In addition, participants began music education in childhood, and developed and maintained music competencies of advanced, expert, and virtuoso skills throughout the life course. PMs' music identity appears to have guided their values and beliefs toward lifelong

learning of music through challenging, yet fun repertoires for community music participation, which resulted in happiness through the life course (Dolfsma, 1999). Participants were motivated (Maslow, 1943a) to participate in community music, which contributed to their maintenance of physical skills (Saarikallio & Erkkila, 2007) and intellect (Gaser & Schlaug, 2003), to promote healthy aging, happiness, and longevity (Eckl, 2012). Further, Seligman's (2011) P.E.R.M.A. model (Kern, Waters, Adler, & White, 2015) agrees with participants' narratives. First, the theme of *happiness of lifelong learning of music*, participants reported numerous emotions of happiness such as accomplishment, affirmation, brain challenges, curiosity, emotional, interpersonal, joy, mastery, new, and satisfaction were reasons for their happiness. These adjectives agree with Seligman's model of positive emotions of happiness to learn. The second theme of *happiness by performing repertoires expertly*, explains the participants' acquisition of descriptors by a better sound, technique, pleasing, and phrasing, and being happier learning than not learning music. Furthermore, PMs reported their happiness was a by-product of practicing, and they believed pride and knowing how to get to a state of happiness was to perform well. PMs also explained that learning and performing new music anchors one's mental, emotional, and spiritual wellness in the accomplishment of foreign languages to perform well that included increased technical skills by social interactions and keeping the music fresh for themselves and for listening audiences. These adjectives of happiness agree with Seligman's accomplishments in music performance, which include engagement in community music, relationships, and meaningfulness of selves and community. The third theme of *lifelong learning of music for fun*, participants reported was the '*doing*' of music that was fun, enjoyable, and exhilarating, which also agrees with Seligman's positive emotions of happiness to learn. Therefore, participants did

experience happiness in learning, and agrees with Aristotle (2009) that art, inquiry, action, and pursuits aimed at something good, is good.

A limitation to this study was scheduling interviews with committed PMs in the narrow time frame of the study. Additionally, performance musicians who play instruments in large ensembles would have provided a greater diversity of PMs and music competencies. Suggestions for future research would be to form research teams consisting of licensed music educators, expert and virtuoso performance musicians, and applied gerontologists (who study the aging process) in yearly research cycles and regional longitudinal studies.

### **Conclusion**

Of all the community activities available to older adults by the Older American Act, community music was chosen by healthy older performance musicians for lifelong learning of music and its intrinsic personal benefits of happiness, and quality of life. This study provided evidence that PMs needed and wanted to maintain existing music competencies while developing higher-level music competencies for music performances. Overall, the phenomenological narratives illustrate lifelong learning of new repertoires and happiness is synergistic to health into old age and therefore paramount to PMs.

## CHAPTER VII. SUMMARY

This phenomenological study explored the wider issues of the role of music among eighteen healthy older performance musicians living in seven U.S. regions. Participants were solo artists, and members of small to large ensembles for most of their lives.

Values and beliefs were built into the framework of interview questions because values and beliefs guide people in their daily lives. Participants' narratives provided evidence that their music identity did validate their values and beliefs toward lifelong learning of music and maintaining their wellness for community music participation. In this study, participants were motivated to learn challenging repertoires for wellness, fun, and satisfaction of performing well. For example, nearly all participants continued to play music and do healthy activities they established in young adulthood to continue their physical and mental health, but a few adapted to normal physiological aspects of aging.

The findings by narratives on the theme of community music participation consisted of four subthemes: (1) values, and beliefs, (2) conductors and repertoires, and a subtheme of emotional memories of music, (3) camaraderie and relationships, and (4) travel. First, participants' music identity, values, and beliefs were core to the reasons music was participants' life and livelihood. Despite being high profile performers, 10 participants did not accept remuneration for community music participation, whereas eight participants accepted and declined remuneration for performances. Second, one-half of participants maintained their participation in music ensembles through the life course, because of their conductors' abilities to choose repertoires that showcased participants' music competencies, and encouraged lifelong learning of music; this also applied to soloists and small band ensembles that chose their own repertoires. For example, participants performed solo as vocalists or instrumentalists with

accompaniment. A subtheme of conductors and repertoires were experiences of emotional memories of music through the life course. Participants' narratives revealed European Western Classical repertoires and 20<sup>th</sup>-century American repertoires not only evoked emotions and imagery, but also encoded into the brain the event, time, and place that participants first heard or performed the memorable music, which continued to evoke the same emotions decades later. Third, promoting social connectedness through camaraderie and relationships sustained long-term memberships in music ensembles. Participants reported having enduring relationships with fellow musicians for more than 40 years. Fourth, most participants reported they valued national and international travel as part of community music participation because socialization was inherent to performances. For example, during national or international travels, participants developed new relationships with the world's people and deeper relationships with fellow musicians. Overall, participants invested countless hours of practice increasing music competencies through the life course for fun and enriching the lives of their communities by memorable music.

The findings by narratives on the second dominant theme of wellness consisted of four subthemes: (1) emotional, (2), intellectual, (3) physiological, and (4) sociological, although 'wellness' comprises seven dimensions. First, the emotional wellness dimension of human development explained participants' sense of self and how trusting they were to share emotions with others. A subtheme of emotional wellness emerged by attitude and passion, which suggested that participants were aging well because they aligned their views of aging. Narratives indicated that passion, a healthy attitude, contentment, and playfulness of spirit were values and beliefs of their culture and society that determined whether they participated in community music through the life course. Narratives also emerged on emotional wellness to arrest situations

that challenged their music identity, sense-of-self, and zest for living. Overall, participants' emotional wellness were viewed as personal benefits of participating in community music.

Second, the intellectual wellness dimension of human development explains higher brain processes of abstract thinking such as worldly ideas, humor, curiosity, learning and mastering music skills, which protected brain health. A common narrative was enjoyment of learning new, unfamiliar, diversified, and cognitively challenging repertoires, which indicated music education, was a substantial motivator to protect against cognitive decline. For example, narratives indicated participants valued lifelong learning of music because participants believed being actively engaged in new and complex repertoires were motivators to achieve self-actualization and self-transcendence as Maslow's human needs hypothesized. Two participants reported the value of intellectual wellness as being personally beneficial to their community music participation because it maintained their mental acuity and knowledge of composers' works.

Third, the physical wellness dimension focused on promoting healthy behaviors of healthful nutrition, vigorous exercise, seven to eight hours nightly sleep, annual physician health assessments as well as avoidance of risky lifestyle behaviors of excessive alcohol consumption, multiple sexual relationships, and illicit drugs. Narratives were difficult to discern in terms of which came first: being physically healthy to age well, or physically fit for the love of performing music. These narratives reveal participants' music identities, values, and beliefs of being committed to physical fitness was for community music participation. Narratives strongly suggested there was a synergistic effect of health and music. That is, participants needed to be healthy to participate in music, and the corollary was that music provided the reason to be healthy. Participants that made adaptations to aging processes to continue to participate in music performances took daytime naps and changed mealtime schedules for late-night concerts, sat

down during long concerts, and changed nutrition and exercise routines. Likewise, narratives suggested that despite sensory adaptations to hearing, vision, and muscular-skeletal symptoms, aging processes did not disrupt the quality of life by participating in community music. Therefore, participants' narratives evidenced their acceptance of the aging process, and when adaptations arose, they chose appropriate actions to ameliorate their conditions. Yet, a few narratives show personal benefits of physical wellness enhanced participants' music competencies, sustained youthfulness, and maintenance of cognitive simulation. Overall, the narratives provided evidence that physical fitness, proper nutrition, and intellectual energy were personal benefits of performing music.

Fourth, the sociological wellness dimension focused on narratives of lifelong learning of music and favorite styles and genres that made meaningful connections with caring people such as their family, friends, neighbors, and community members. One narrative explained the importance of accepting the aging process as a value and personal benefit by camaraderie, and socialization by generativity of values to multiple generations. From a sociological viewpoint, then, *personal attributes* by genetics and personality traits were the reasons participants needed mentally challenging repertoires. *Cohort effects* explained GI, Silent, and Boomer generations' enjoyment of 20<sup>th</sup> century genres of American Broadway, Big Band, and Swing Jazz preferences. *Period effects* explained participants' enjoyment of Folk, Country, Rock and Roll, and Blues genres. In all, the wellness dimension narratives provided evidence that eighteen participants were healthier on all four wellness dimensions because of their community music participation than if they had not participated in community music at all.

The findings by narratives on the third dominant theme of happiness consisted of three subthemes on the motivations of lifelong learning of music: (1) happiness by learning new

complex repertoires, (2) happiness by performing repertoires expertly, and (3) for fun, which provided evidence that lifelong learning of music was resultant to happiness, not learning for the sake of happiness. First, whether developing music competencies or hours of practice were reasons of happiness, it was necessary to ask participants the number of hours they practiced at home and in rehearsals. The *average* weekly hours reported ranged from six to 22 hours; however, participants whose careers were both music conductors and music educators reported 30+ hours per week. One participant was unable to report hours of practice conceivably because practice overlapped during worldwide travel to performances in distinguished venues. Nevertheless, 12 narratives positioned lifelong learning of music as a primary value. Furthermore, narratives cited learning new complex repertoires as an accomplishment, affirmation, brain challenges, curiosity, emotional, interpersonal, joy, mastery, new, and satisfaction as reasons for positive emotions of happiness. Second, many narratives reported happiness was resultant to performing repertoires expertly in community music participation because of acquisition of better phrasing technique, pleasing sound, and learning of music. Furthermore, happiness anchored to emotional, intellectual, and spiritual wellness by learning foreign languages, which increased technical skills that kept the music fresh for both themselves and listening audiences. Third, a few narratives provide evidence that lifelong learning of music and performing was fun, yet, the tone and tenor of all narratives suggested participants shared fun as a value by actually performing the music, which was enjoyable, exhilarating, and therefore fun.

Overall, through the Older Americans Act of 1965, many community activities are available to older Americans such as community music (i.e., choirs, orchestras, symphonies, and bands), which offers many personal benefits of wellness, happiness, and quality of life. Wellness

was fundamental to meeting the physiological demands of expert to virtuoso music competencies. This study provided evidence that healthy older performance musicians needed and wanted challenging complex repertoires. In particular, participants were cognizant that the way to sustain their existing music competencies was to invest hours of practice, and the need to develop higher music competencies meant sustaining or developing higher order brain functions. Therefore, the phenomenological narratives illustrate the role of music on wellness is chief among all participants.

### **Limitations**

Limitations to this study were first, scheduling interviews during major holidays with committed performance musicians in the narrow time frame of the study. By not having sufficient time to schedule interview times excluded instrumentalists from large orchestras, symphonies, and bands who could have provided a greater diversity of narratives. Second, telecommunications made transcribing interviews difficult, seemingly due to regional storms, cloud cover, and high Internet traffic. Third, this researcher followed the recommendations of qualitative researchers to provide potential participants with interview questions in advance of scheduled interviews. However, in this study the participants overlapped their answers to many questions. Therefore, providing interview questions in advance of interviews is a limitation because of the labor intensive coding, analyzing, and interpreting the data beyond the norm of qualitative methods.

### **Suggestions for Future Research**

An important suggestion for future research with performance musicians is first, the inclusion of audiology interview questions, and if possible, audiology screening and treatment because hearing loss is endemic among performance musicians of all ages. Researchers should

communicate to music and audiology advocates the need for musicians to adopt protective hearing devices because music can risk hearing health. Second, expand the research study by regional U.S. teams on yearly cycles and establish regional longitudinal studies. Collaborative teams should comprise applied gerontologists who study the aging process, audiologists, and neuroanatomists, and NASM licensed music educators, and NASM expert and virtuoso performance musicians. Overall, research teams should focus their findings for the purpose of building a base of knowledge and bridging the gap in the qualitative literature for the benefit of both older and younger cohort generations. This will mean well-planned, designed, organized, and implemented research studies whereby databases are usable for both qualitative and quantitative researchers.

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## APPENDIX A. OLDER AMERICANS ACT OF 1965

### Older Americans Act of 1965

#### Social Security Titles

Note: Only statutes pertaining to community music making are provided below; otherwise, all statutes are available at U.S. Code (2014).

[www.uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title42-section3030d&num=0&edition=prelim](http://www.uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title42-section3030d&num=0&edition=prelim).

#### TITLE 42 - THE PUBLIC HEALTH AND WELFARE CHAPTER 35 - PROGRAMS FOR OLDER AMERICANS SUBCHAPTER III - GRANTS FOR STATE AND COMMUNITY PROGRAMS ON AGING

##### Part B--Supportive Services

###### (a) Grants

The Assistant Secretary shall carry out a program for making grants to States under State plans approved under section 3027 of this title for any of the following supportive services:

- (1) health (including mental health), education and training, welfare, informational, recreational, homemaker, counseling, or referral services;
- (2) transportation services to facilitate access to supportive services or nutrition services, and services provided by an area agency on aging, in conjunction with local transportation service providers, public transportation agencies, and other local government agencies, that result in increased provision of such transportation services for older individuals;
- (7) services designed to enable older individuals to attain and maintain physical and mental well-being through programs of regular physical activity, exercise, music therapy, art therapy, and dance-movement therapy;
- (24) activities to promote and disseminate information about life-long learning programs, including opportunities for distance learning;

#### SUBCHAPTER IV. ACTIVITIES FOR HEALTH, INDEPENDENCE, AND LONGEVITY

##### §3031. Purposes

The purposes of this subchapter are—

- (2) to design, test, and promote the use of innovative ideas and best practices in programs and services for older individuals;

##### Part A—Grant Programs

§3032f. Demonstration, support, and research projects for multigenerational and civic engagement activities.

Text contains those laws in effect on November 22, 2014

###### (a) Grants and contracts

The Assistant Secretary shall award grants and enter into contracts with eligible organizations to carry out projects to-

- (1) provide opportunities for older individuals to participate in multigenerational activities and civic engagement activities designed to meet critical

community needs, and use the full range of time, skills, and experience of older individuals, including demonstration and support projects that-

(2) coordinate multigenerational activities and civic engagement activities, promote volunteerism, and facilitate development of and participation in multigenerational activities and civic engagement activities.

(b) Use of funds

An eligible organization shall use funds made available under a grant awarded, or a contract entered into, under this section to-

(1) carry out a project described in subsection (a); and

(2) evaluate the project in accordance with subsection (f).

(c) Preference

In awarding grants and entering into contracts to carry out a project described in subsection

(a) the Assistant Secretary shall give preference to-

(1) eligible organizations with a demonstrated record of carrying out multigenerational activities or civic engagement activities;

(2) eligible organizations proposing multigenerational activity projects that will serve older individuals and communities with the greatest need (with particular attention to low-income minority individuals, older individuals with limited English proficiency, older individuals residing in rural areas, and low-income minority communities);

(3) eligible organizations proposing civic engagement projects that will serve communities with the greatest need; and

(4) eligible organizations with the capacity to develop meaningful roles and assignments that use the time, skills, and experience of older individuals to serve public and nonprofit organizations.

(d) Application

To be eligible to receive a grant or enter into a contract under subsection (a), an organization shall submit an application to the Assistant Secretary at such time, in such manner, and accompanied by such information as the Assistant Secretary may reasonably require.

(e) Eligible organizations

Organizations eligible to receive a grant or enter into a contract under subsection (a)-

(1) to carry out activities described in subsection (a)(1), shall be organizations that provide opportunities for older individuals to participate in activities described in subsection (a)(1); and

(2) to carry out activities described in subsection (a)(2), shall be organizations with the capacity to conduct the coordination, promotion, and facilitation described in subsection (a)(2), through the use of multigenerational coordinators.

(f) Local evaluation and report

(1) Evaluation

Each organization receiving a grant or a contract under subsection (a) to carry out a project described in subsection (b) shall evaluate the multigenerational activities or civic engagement activities carried out under the project to determine-

(A) the effectiveness of the activities involved;

(B) the impact of such activities on the community being served and the organization providing the activities; and

(C) the impact of such activities on older individuals involved in such project.

(h) Definitions

As used in this section:

(1) Multigenerational activity

The term "multigenerational activity" means an activity that provides an opportunity for interaction between 2 or more individuals of different generations, including activities connecting older individuals and youth in a child care program, a youth day care program, an educational assistance program, an at-risk youth intervention program, a juvenile delinquency treatment program, a before- or after-school program, a library program, or a family support program.

(2) Multigenerational coordinator

The term "multigenerational coordinator" means a person who-

(a) builds the capacity of public and nonprofit organizations to develop meaningful roles and assignments, that use the time, skill, and experience of older individuals to serve those organizations; and

(b) nurtures productive, sustainable working relationships between-

(i) individuals from the generations with older individuals; and

(ii) individuals in younger generations.

Amendments

2006-Pub. L. 109-365 amended section generally, substituting provisions relating to demonstration, support, and research projects for multigenerational and civic engagement activities for provisions relating to demonstration projects for multigenerational activities.

SUBCHAPTER IV. ACTIVITIES FOR HEALTH, INDEPENDENCE,  
AND LONGEVITY

Part A - Grant Programs

§3032k. Community innovations for aging in place

(d) Use of funds

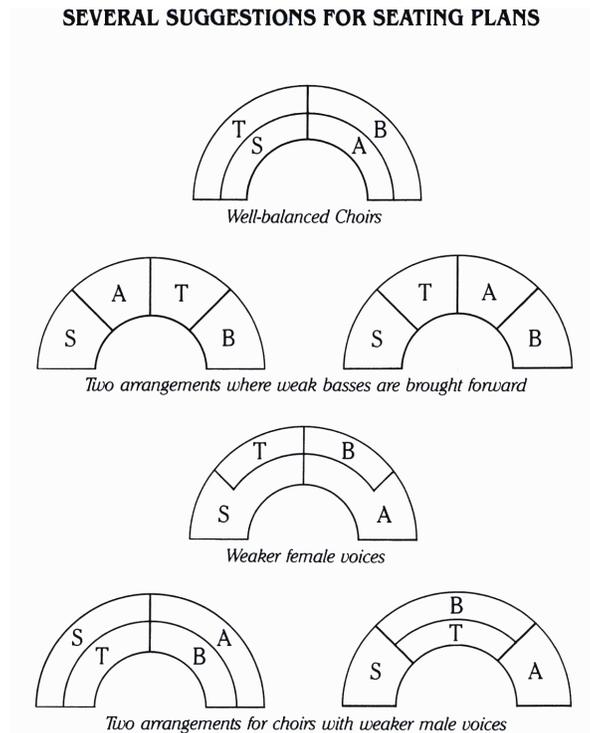
(1) In general

An eligible entity that receives a grant under subsection (b) shall use the funds made available through the grant to-

(A) ensure access by older individuals in the project area to community-based health and social services consisting of-

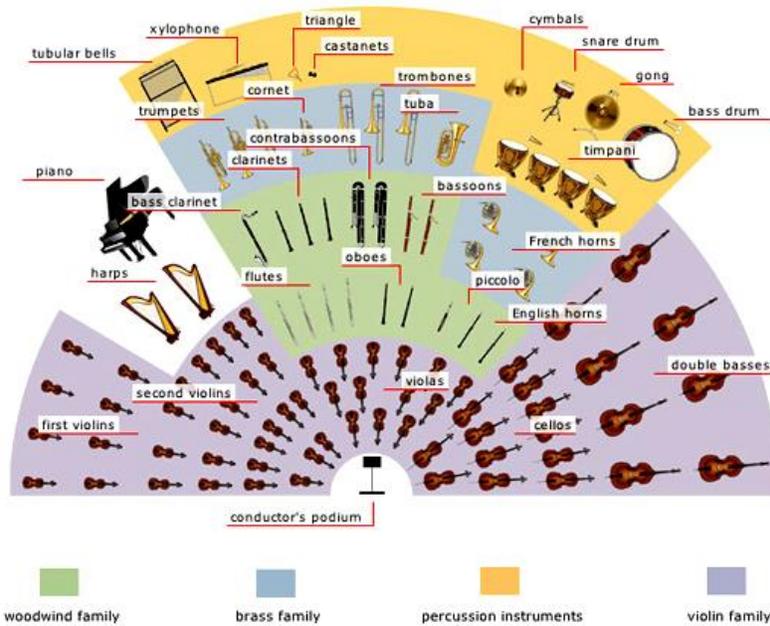
(iii) education, socialization, and recreational activities.

## APPENDIX B. SUGGESTIONS FOR ENSEMBLE SEATING ARRANGEMENTS



Several Seating Plans for Choirs

Source: Union for Reform Judaism (2015). (Used by permission).



Seating Plan by Orchestral Sections

Source: Rosmanitz, K. (2015). (Used by permission).

## APPENDIX C. CONDUCTORS' SCORES

**Ave Maria** Jacob ARCADELT

(Moderato)

SOPRANO  
ALTO  
TENOR  
BASS

(Moderato)

fa  
instruments

Copyright © Andrew Moore 2009

A Conductor's Score for a Choir  
Source: Score Exchange (2015).  
(Used by permission)

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5

**Allegro maestoso e largamente**

**THEME A**

Piccolo  
Flutes I & II  
Oboes I & II  
Clarinets in B♭ I & II  
Bassoons I & II  
I & II  
Horns in F III & IV  
Trumpets in C I & II  
I & II  
Trombones III (Bass) & Tuba  
Timpani  
Percussion  
Harp  
Violin I  
Violin II  
Viola  
Cello  
Bass

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A Conductor's Score for a Symphony  
Source: Boosey & Hawkes (2015)  
(Used by permission).

## APPENDIX D. IRB EXEMPT FORM NO. 1



September 8, 2015

Dr. Ardith Brunt  
Health, Nutrition & Exercise Sciences

Re: IRB Certification of Exempt Human Subjects Research:  
Protocol #HE16037, "The Role of Music in the Lives of Older Men and Women"

Co-investigator(s) and research team: Barbara Hutchison

Certification Date: 9/8/2015 Expiration Date: 9/7/2018  
Study site(s): varied  
Sponsor: n/a

The above referenced human subjects research project has been certified as exempt (category # 2) in accordance with federal regulations (Code of Federal Regulations, Title 45, Part 46, Protection of Human Subjects). This determination is based on the original protocol form and revised recruitment/consent documents (received 9/4/2015).

Please also note the following:

If you wish to continue the research after the expiration, submit a request for recertification several weeks prior to the expiration.

The study must be conducted as described in the approved protocol. Changes to this protocol must be approved prior to initiating, unless the changes are necessary to eliminate an immediate hazard to subjects.

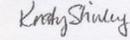
Notify the IRB promptly of any adverse events, complaints, or unanticipated problems involving risks to subjects or others related to this project.

Report any significant new findings that may affect the risks and benefits to the participants and the IRB.

Research records may be subject to a random or directed audit at any time to verify compliance with IRB standard operating procedures.

Thank you for your cooperation with NDSU IRB procedures. Best wishes for a successful study.

Sincerely,

  
Digitally signed by Kristy Shirley  
DN: cn=Kristy Shirley, o=NDSU,  
ou=Health/Nutrition/Exercise Sciences,  
email=kristy.shirley@ndsu.edu, c=US  
Date: 2015.09.08 10:33:00 -0500

Kristy Shirley, CIP, Research Compliance Administrator

For more information regarding IRB Office submissions and guidelines, please consult [http://www.ndsu.edu/research/integrity\\_compliance/irb/](http://www.ndsu.edu/research/integrity_compliance/irb/). This Institution has an approved FederalWide Assurance with the Department of Health and Human Services: FWA00002439.

### INSTITUTIONAL REVIEW BOARD

NDSU Dept 4000 | PO Box 6050 | Fargo ND 58108-6050 | 701.231.8995 | Fax 701.231.8098 | [ndsu.edu/irb](http://ndsu.edu/irb)

Shipping address: Research 1, 1735 NDSU Research Park Drive, Fargo ND 58102

NDSU is an EO/AA university.

## APPENDIX E. IRB EXEMPT FORM NO. 2

Date Received



**NDSU** NORTH DAKOTA  
STATE UNIVERSITY

IRB Protocol #:  
**HE16037**

**INSTITUTIONAL REVIEW BOARD**  
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### Protocol Amendment Request Form

*Changes to approved research may not be initiated without prior IRB review and approval, except where necessary to eliminate apparent immediate hazards to participants. Reference: SOP 7.5 Protocol Amendments.*

*Examples of changes requiring IRB review include, but are not limited to changes in: investigators or research team members, purpose/scope of research, recruitment procedures, compensation strategy, participant population, research setting, interventions involving participants, data collection procedures, or surveys, measures or other data forms.*

**Protocol Information:**

Protocol #: **HE16037** Title: **The Role of Music in the Lives of Older Men and Women**

Review category:    Exempt            Expedited            Full board

Principal investigator: **Ardith R. Brunt, PhD**   Email address: **Ardith.Brunt@NDSU.edu**  
Dept: **HNES**

Co-investigator: **Barbara Hutchison**           Email address: **Barbara.Hutchison@NDSU.edu**  
Dept: **HD&E**

Principal investigator signature, Date: Ardith Brunt (email) 10/21/15

 In lieu of a written signature, submission via the Principal Investigator's NDSU email constitutes an acceptable electronic signature.

**Description of proposed changes:**

1. Date of proposed implementation of change(s)\*: **November 1, 2015**  
*\* Cannot be implemented prior to IRB approval unless the IRB Chair has determined that the change is necessary to eliminate apparent immediate hazards to participants.*
2. Describe proposed change(s), including justification:  
**Student researcher needs to extend the time needed to invite and interview research participants from October 31, 2015 to March 31, 2016.**
3. Will the change(s) increase any risks, or present new risks (*physical, economic, psychological, or sociological*) to participants?

Protocol Amendment Request Form  
NDSU Institutional Review Board  
Form revised May 2015

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**APPENDIX F. IRB CONSENT FORM**

**North Dakota State University  
College of Human Development and Education  
Fargo, ND 58108**

Ardith R. Brunt, PhD, Principal Investigator  
Ardith.Brunt@NDSU.edu  
Barbara Hutchison, PhD candidate researcher  
Barbara.Hutchison@NDSU.edu

**Audio or Audiovisual Recording Consent**

Your verbal agreement (or signature) of this audio or audiovisual recording, gives me, Barbara Hutchison, permission to record your interview so that I might transcribe it verbatim. I, and my advisor Dr. Ardith Brunt, are the only two people who will have access to the information. We will make every effort to (1) protect your confidentiality and anonymity by removing your name and location so they do not appear in my dissertation, (2) the audiovisual (or audio) recording will be erased from the recorder, and (3) the interview data will be locked in Dr. Brunt’s office file cabinet.

I, \_\_\_\_\_ (name of participant), give my verbal (or written) consent for Barbara Hutchison to record my interview for verbatim transcription. I understand that my name, location, and any identifiers will not appear in the dissertation and publication to protect my confidentiality and anonymity.

\_\_\_\_\_  
Participant’s Vocal (or Signature) Agreement

\_\_\_\_\_  
Date

If you have questions about the rights of human participants in research, or to report a complaint about the research, contact the NDSU Human Research Protection Program at (701) 231-8995 or (855) 800-6717 or write to NDSU.IRB@NDSU.edu.

## APPENDIX G. RECRUITMENT LETTER

Dear Potential Research Participant:

My name is Barbara Hutchison, and I am writing to invite you to participate in my research study titled *The Role of Music among Healthy Older Performance Musicians*. I am a doctoral student in the Health, Nutrition, and Exercise Sciences at the North Dakota State University. My undergraduate degree is music, and graduate studies are gerontology (aging issues).

Because there are few studies that focus on healthy older community musicians, I am interviewing a sample population of 18-21 men and women, age 50 and older. The interview questions will focus on your regular participation in community music by (1) singing, (2) playing an instrument, or (3) composing music. The interview will take from 30 to 45 minutes, and your participation is voluntary; however, you may decline to participate at any time without penalty.

I will need your consent to be interviewed by audio or audiovisual recording for verbatim transcription for accuracy, but the recording will be erased from the recorder and computer after the research concludes. The data from your interview will be stored according to a coding alias, so your responses will remain confidential. Your information will be combined with information from other participants. The study is a partial fulfillment toward a doctoral degree, and the study may be published; however, your identity will not appear in the dissertation. In appreciation of your participation, a copy of the publication will be mailed to you.

Should you have questions about your rights as a research participant, or would like to report a research-related problem, please contact the NDSU Institutional Review Board at:

NDSU IRB Office  
(701) 231-8908 (local)  
(855) 800-6717 (toll-free)  
ndsu.irb@ndsu.edu

Should you have any questions regarding this research project, please contact

Ardith R. Brunt, PhD, Principal Investigator  
Ardith.Brunt@ndsu.edu

Barbara Hutchison, PhD candidate  
Barbara.Hutchison@ndsu.edu

Thank you for your time, and I look forward to hearing from you concerning your decision.

With best regards,  
Barbara Hutchison, PhD candidate

## APPENDIX H. RECRUITMENT FLYER

College of Human Development and Education  
Department of Health, Nutrition, and Exercise Sciences  
Fargo, ND 58108

### Research Project Information

- The Department of Health, Nutrition, and Exercise Sciences of the North Dakota State University invites from 18-21 older adults to participate in this research study. Taking part in this study is voluntary, and you may decline to participate at any time without penalty.
- Research Title: *The Role of Music among Healthy Older Performance Musicians*
- The purpose of this study is to discover the meaning of music in the lives of older men and women age 50 and older, and their motivation for learning music and participation in community music.
- The interview will take approximately from 45 to 60 minutes.
- The researcher will ask you questions about your regular participation in singing or playing an instrument, or composing music for participation in community music.
- The interview will be recorded and transcribed for accuracy, and later erased from the recorder and computer. Your data will be stored according to a coding alias name, so your responses will remain confidential.
- Your interview will be combined with information from other participants in the study toward fulfillment of a doctoral degree, and may be published. Your identity will not appear in the dissertation.

### Contact Information

- If you have any questions regarding this research project, please contact.

**Ardith R. Brunt, PhD, Principal Investigator**

Ardith.Brunt@ndsu.edu

**Barbara Hutchison, PhD candidate**

Barbara.Hutchison@ndsu.edu

- If you have questions about your rights as a research participant, or would like to report a research-related problem, please contact the NDSU Institutional Review Board at:

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ndsu.irb@ndsu.edu



## APPENDIX I. RECRUITMENT BROCHURE

*We want to know what the role of music is in the lives of healthy older musicians!*

**Selection criteria is that:**

1. you are age 50 or older
2. living independently in the community
3. you sing, play an instrument, or compose music
4. you earned a music degree, or received private tutoring, or are self-taught
5. you possess music skills that are advanced, expert, or virtuoso
6. you regularly participate in community music
7. your hearing has been screened (or treated with hearing aids) within the past 2 years. Otherwise, you will agree to a simple piano hearing test by the researcher in your performance range (soprano=C4-C6; mezzo-soprano=A3-A5; contralto=F3-F5; countertenor=E3-E5; tenor=C3-C5; baritone=A2-A4; bass=E2-E4).
8. you are not consuming antidepressant drugs (depression, anxiety, alcoholism, dementia).
9. you are able to stand on risers to sing or sit in an orchestral section to play an instrument (full mobility).

**Purpose and aim of research:**

- ◆ To identify the role of music in the lives of healthy older musicians.
- ◆ To identify what motivates healthy older musicians to regularly participate in community music.
- ◆ To identify how participation in community music contributes to healthy aging and happiness.

**NDSU** NORTH DAKOTA STATE UNIVERSITY

College of Human Development and Education  
Dept. HNES, 351 EML  
Fargo, North Dakota 58108

Ardith R. Brunt, PhD, Principal Investigator  
Barbara Hutchison, PhD candidate researcher  
[Barbara.Hutchison@NDSU.edu](mailto:Barbara.Hutchison@NDSU.edu)



<http://yadavpathibhivani.blogspot.com/2012/08/singing-lowers-blood-pressure>



<http://www.latinmusiccafe.com/wp-content/uploads/2014/10/SEIO->



<http://arolingrams.blogspot.com/2011/03/using-music->

**Participation in research promotes education in research concerning healthy aging issues.**

Title: *The Role of Music among Health Older Performance Musicians*. Our data is used for research only.

- ◆ Participation is confidential.
- ◆ For more information, email [Barbara.Hutchison@NDSU.edu](mailto:Barbara.Hutchison@NDSU.edu).
- ◆ If you have questions about the rights of human participants in research, or to report a complaint about the research, contact the NDSU Human Research Protection Program at (701) 231-8995 or (855) 800-6717 or write to [NDSU.IRB@NDSU.edu](mailto:NDSU.IRB@NDSU.edu).

Source: Hutchison, B. (2015).

**APPENDIX J. REFLEXIVE MEMO AND JOURNAL NOTES**

**Reflexive Memo Notes (during the interview)**

Researcher’s notes will be part of data collection, and stored in PI’s office after research completion.

Name of Participant: \_\_\_\_\_

Residence (City/State): \_\_\_\_\_

Alias: \_\_\_\_\_

Scheduled Interview (time/day/date): \_\_\_\_\_

Place of Interview:  In-person       Internet       Telephone

Age: \_\_\_\_\_ Gender: \_\_\_\_\_

Music Genres:

Sacred: classical, gospel, praise, et cetera \_\_\_\_\_

Secular: classical, marching band, jazz, big band, swing, rock `n roll, country, western, et cetera \_\_\_\_\_

**Vocal range:**

soprano=C4-C6     mezzo-soprano=A3-A5     alto/contralto=F3-F5

countertenor=E3-E5     tenor=C3-C5     baritone=A2-A4     bass=E2-E4

**Symphony/Orchestral Section:**

string     brass     reed     percussion     instrument \_\_\_\_\_

**Music composition:**

Sacred: classical, gospel, praise, et cetera \_\_\_\_\_

Secular: classical, marching band, jazz, big band, swing, rock `n roll, country, western, et cetera \_\_\_\_\_

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**Reflexive Journal Notes (immediately following the interview)**

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Source: Hays & Singh (2011).

## APPENDIX K. DEMOGRAPHIC QUESTIONS

Name of Participant: \_\_\_\_\_

Residence (City/State): \_\_\_\_\_

Alias: \_\_\_\_\_

Scheduled Interview (time/day/date): \_\_\_\_\_

Place of Interview:  In-person  Internet  Telephone

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### Demographic Questions

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1. What is your gender?
2. What year were you born?
3. What is your marital status?
4. What is your race/ethnicity?
5. What is your highest level of education?
6. What year did you achieve your highest level of education?
7. What is your employment status?  F-T  P-T  Retired  Other

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Source: Hutchison, B. (2015).

## APPENDIX L. SEMI-STRUCTURED INTERVIEW QUESTIONS

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### Community Music

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1. What motivates you to sing, or play an instrument, or compose music for community music?
2. What does it mean to you to perform in community music?
3. (a) How would you rate your current music skill level?  
 advanced  expert  virtuoso  
(b) How long did it take you to develop your music skills?
4. How long have you participated in community music?
5. What music genre do you enjoy performing most?
6. (a) Do you travel statewide, nationally, or internationally to perform in community music?  
(b) How important is travel to you?  
(c) If you do not travel, would you like to?
7. How do your music performances express your values and beliefs to audiences?
8. (a) Describe any emotional memories you associate with music.  
(b) What age were you affected by that music?
9. Can you identify a particular characteristic that maintains your participation in community music? By this, I mean is your participation based on the camaraderie of musicians, or professional performance attire, music venues, travel, or any other characteristic?
10. Describe your satisfaction of participation in community music? By this I mean, are the music repertoires and venues interesting and challenging to maintain weekly practice, rehearsal, and performance?
11. Would you perform music whether you were paid or not to perform in community music? By that I mean, is music your life or livelihood?

### Wellness

12. Can you explain how your participation in community music has helped you to age well? Or doesn't music participation help you to age well?
13. What adaptations have you made to your participation in community music because you are growing older?
14. What personal benefits do you gain in participating in community music?

### Happiness

15. (a) What motivates you to continue learning music? By this, I mean what is the motivation to practice your repertoires in preparation of rehearsals and performances?  
(b) Approximately how many hours each week do you practice your repertoires?
16. Does learning music influence your sense of happiness? If yes, in what way?
17. Describe the relationships you have developed with musicians and/or audiences since participating in community music?
18. How have other musicians and audiences changed your interactions with other people in your community?
19. Is there anything I did not ask that you would like to add to your interview?

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Source: Hutchison, B. (2015).