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Making space for inclusive approaches: A review of adolescent gender identity in high school choirs

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Abstract

Gender identity has received significant attention in choral music education, perhaps more than any other field of music education research. Issues concerning gender in choirs continue to prove challenging for adolescents and secondary school teachers. This article synthesizes a narrative literature review on gender identity research in high school choirs, offers suggestions for inclusive choral practices, and raises possibilities for future research. Gender research in Western cultural school choral contexts over the last century focused on a preoccupation with the shortage of male singers. Female participation in choir was considered commonplace and taken for granted, resulting in females being neglected in research until recently. Early material on male adolescent choral involvement tended to make very broad generalizations situated in hegemonic masculinity. By the 1990s, writers such as Koza were noting that these approaches to the issue had been unsuccessful, and recent writers have exposed the rich personal and contextual aspects of singers and their approaches to singing. Research in the past decade has attempted to demystify and empower transgender singers, though there is still much to learn in this area. Common inclusive approaches for diverse gender identities emerged from the literature. These include gender-inclusive language, a welcoming environment and supportive mentors, considered and contextualized repertoire choices, and whole group vocal pedagogy sensitive to individual needs. Future research is recommended to investigate the evolving relationship of contemporary gender identities with other components of the self, how multiple gender identities can be supported and positively co-exist, and the possible contributions of choral music education to gender identity development in a greater range of contexts, cultures, and traditions.

Keywords: Gender identity, inclusion, masculinity, femininity, LGBTQ+, transgender, adolescence, music education, singing pedagogy, choir, review

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Introduction

Debates concerning gender identity have plagued choral music education for centuries, perhaps more than any other field of music education. Attitudes and practices concerning gender in choral music and membership have significantly changed over time, ranging from neglect, panic recruitment, active inclusion, and demystification, to making space. The continued diversification of choral music and membership has brought with it ongoing challenges for high school teachers and conductors, particularly regarding vocal technique, pedagogy, and roles and relationships.

This article presents a narrative literature review on issues pertaining to adolescent gender identity in high school choirs and aims to synthesize inclusive approaches, offer suggestions for contemporary practice, and canvas new discussions. For this article, we aligned with the United Nations Educational, Scientific and Cultural Organization's (UNESCO) agenda for inclusive education, defined as "a process: actions and practices that embrace diversity and build a sense of belonging, rooted in the belief that every person has value and potential and should be respected" (UNESCO, 2020, p. 11).

Methodology

Narrative overviews of literature are useful as they pull many perspectives together, present the development of a topic, and can provoke thoughts on ways forward (Green et al., 2006). Previous gender identity research in choral settings has typically considered the field from masculine, feminine, or transgender perspectives in isolation, whereas this article attempts to unite these discussions. A wide range of seminal and contemporary international research journal articles, book chapters, and texts in English by leading scholars and influential voices in music and choral education were drawn upon from the authors' personal and respective university libraries, academic databases, and Google Scholar. There were no restrictions on dates. It is noted that articles from publications for practitioners are given serious consideration in this review, such as the *Choral Journal* published by the American Choral Directors Association (ACDA), as they are important contributors in shaping the field. Sources were evaluated considering their relevance, credibility, salience, and for their contribution towards emerging issues. Literature was analyzed using reflexive thematic analysis (Braun & Clarke, 2006; Braun, Clarke, Hayfield & Terry, 2019). Throughout the analytic process, we continually discussed, reflected on, and refined emerging patterns in the phenomena. Results are presented thematically, first beginning with chronological perspectives on gender identity in high school choral settings followed by a synthesis of gender inclusive approaches. Despite attempts to provide a global perspective, much of the cited literature is situated in Western English-speaking countries. A significant world population is silenced, notably from non-English-speaking countries, Africa, South America, the Middle East, Asia, and the Pacific Islands. This absence may represent the academic privilege of those authors publishing in English and suggests an examination of broader issues concerning gender identity in specific cultural contexts is needed.

Terms and Definitions

For the purposes of this article, we have adopted definitions used by The Human Rights Campaign (HRC), the largest LGBTQ+ civil rights organization within the United States. The HRC "strives to end discrimination against LGBTQ+ people and realize a world that achieves fundamental fairness and equality for all" in the United States and internationally (Human Rights Campaign [HRC], n.d.a). Gender identity refers to "one's innermost concept of self as male, female, a blend of both or neither – how individuals perceive themselves and what they call themselves. One's gender identity can be the same or different from their sex assigned at birth" (Human Rights Campaign [HRC], n.d.b). Transgender is "an umbrella term for people whose gender identity and/or expression is different from cultural expectations based on the sex they were assigned at birth" (HRC, n.d.b). In this article, we do not assume the gender identity of people. Instead, we reference birth-assigned sex and use "male," "female," and "they/their" except when quoting from existing literature that may use other terms.

Gender identity in choral settings intersects and works alongside other identities (Cayari, 2019; Hess, 2016), such as sexual (Palkki & Caldwell, 2018), social (Parker, 2018), musical (Goopy, 2020, 2022, 2023), singing (O'Bryan, 2015), religious (Owens & Welch, 2017), racial (Elorriaga, 2011; Kruse, 2016; Ververis, 2021), cultural (Monks, 2003; Orton & Pitts, 2019), and socioeconomic. The relationship between vocal and gender identities can be complex, is dynamic, and differs between individuals (Palkki, 2020).

The Missing Males

Disparities in choral group membership have long been discussed in gendered terms and the discussion focused on the shortage of male singers (Brinson, 1996; Freer, 2006, 2007; Harrison & Young, 2017). Koza noted that there was an issue of "missing males" in singing groups reported at the beginning of the 20th century (Koza, 1993), and the gender influence on singing and instrumental choice was well canvassed (Abeles, 2009; Abeles & Porter, 1978; Hallam et al., 2008; Harrison, 2007; O'Neill & Boultona, 1996; Wrape et al., 2016). There has been consistent commentary that males have not joined singing groups because singing, particularly in a high voice, is considered "effeminate" (Leck, 2009) and in opposition to hegemonic masculinity. "Hegemonic masculinity" (Connell, 1987, 2005; Connell & Messerschmidt, 2005) refers to "the configuration of gender practice which embodies the currently accepted answer to the problem of the legitimacy of patriarchy, which guarantees (or is taken to guarantee) the dominant position of men and the subordination of women" (Connell, 2005, p. 77). For example, in England, Ashley (2009) found that English Choirboys would not tell their school friends that they were choir members and effectively led "double lives" (p. 109) in an effort to avoid scrutiny. Adolescent males were afraid to admit to singing because it was characterized as a feminine activity, and many men did not sing at all in a choral setting.

A traditional approach to this "gender problem" was binary opposition. If singing was

marginalized because it was "effeminate" and therefore not suitable for males, singing should be made more "masculine" to improve the numerical gender balance in choirs. Conductors were encouraged to take a hyper-heteronormative approach, encouraging males to see singing as something that was appropriate for "manly men" (Ashley, 2009; Freer, 2019). Koza (1993–1994) observed that "prevalent stereotypes also associate male homosexuality with femininity" (p. 61). The stereotyping of singing as feminine and related to homosexuality led Koza to claim that "homophobia, in addition to misogyny, may play a role in boys' reticence to sing" (p. 58). Singing by adult males was being condemned by association with femininity and male homosexuality as the "undesirable 'other'" (p. 58). Koza concluded that "nearly all the texts I examined drew from and reinforced systems of ideas that tend to perpetuate unequal power relations and that foster the continued oppression of women and gay men" (p. 61). Koza (1993–1994) exposed the over-simplification of gender identity in early choral texts. These texts recommended singing repertoire that would "thrill the redblooded male" and avoiding songs about "birds, daisies and butterflies" (Roe, 1983, p. 176). As well, males were to be separated from females in ensembles and every effort was to be made to ally the singing program with prominent and successful athletes (assumed to be male) (Miller, 2008; Roe, 1983). This "macho" characterization of singing may have unintentionally marginalized males who did not fit a macho stereotype (Brinson, 1996; Koza, 1993–1994; Young, 2017). As well as allegedly making conductors and teachers complicit in oppression, hyper-masculinizing singing had little effect on the number of adolescent males singing in choirs.

Neglecting "Ordinary" Females

Females have been historically neglected in choral singing. Patriarchal gender roles in Christian churches have excluded females from Cathedral choral music for millennia (Mould, 2007; Welch, 2010). At the turn of the twenty-first century, a shortage of male trebles, and an interest in gender equity, resulted in female singers being permitted to join the previously male bastion of the English cathedral choir (Owens & Welch, 2017). Owen and Welch focused on the comparative utility of children of different genders in the cathedral context and found that female children were as capable as male children. In Wells Cathedral, females and their parents were happy to adopt the traditional dress of the "professional" chorister; "cassock and surplice" with hair "up," and jewelry forbidden (Owens & Welch, 2017, p. 13). Gender concerns have clearly influenced choir membership on both sides of the Atlantic.

In secular settings, females significantly outnumber male singers in choral programs. Elpus (2015) found that high school choirs in the United States had consistently been 70% female-identifying and 30% male-identifying for the previous thirty years, with similar findings in English, Australian and German community choral settings (Clift & Hancox, 2010; Clift et al., 2010). Despite connotations of choral singing being feminine, adolescent females were historically excluded from choral singing research. O'Toole (1998) argued that

because society considered singing a normal feminine activity, females were neglected in the research, while males were privileged. She pointed out that most choral method books addressed issues with male singers, such as changing voices, recruitment, and engagement, but very few addressed issues related to females. Books did not address "what it means to be a female singer who is not difficult to recruit, has few noticeable vocal problems, is well-behaved and spends most of her time waiting for directors to turn their focus from male singers" (p. 15). O'Toole advocated for choral texts to address female puberty, gender inequity in repertoire selection, and the loss of opportunities and encouragement, which stemmed from the belief that "girls who sing are ordinary" while "boys who sing are special" (p. 9).

The past 30 years have seen an increased interest in the physiological and psychological issues related to the adolescent female changing voice. Sweet (2016) conducted a review of the *Choral Journal* from 1991 to 2015 and found that only five articles discussed the female changing voice with limited new understandings, whereas the male voice change was mentioned 33 times since 1977. Following the introduction of Eclectic Theory by Cooksey (1977), Lynne Gackle published *The Young Adolescent Female Voice (Ages 11-15): Classification, Placement, and Development of Tone* (Huff-Gackle, 1985). It was the first article of its kind, and Gackle (1991, 2000, 2006, 2011, 2014) became a leading expert on female vocal development, describing four stages (later named phases) of the female voice change as "shades of change."

In recent years, it has been recognized that many of the physiological and psychological struggles faced by adolescent males also apply to females (Ashley, 2009; Sweet, 2015). Sweet (2015) found that adolescent female singers also struggled with self-deprecation and humiliation and faced the same psychological and emotional risks as males during the voice change. She argued that adolescent females should not be ignored just because their issues are seemingly less severe than males.

Persistent Stereotyping

Gender stereotypes, particularly concerning males, persist. In 2009, Ashley claimed that "boys will sing provided they are not asked to choose between choir and sport, an unfair choice that youngsters should not have to make" (Ashley, 2009, p. 103). At the time, Ashley accepted a commonplace stereotype that males were naturally sporty and would prefer sport to singing. Recently, authors have questioned this assumption by noting the increasing number of males who do not identify with these traits and characteristics (McBride, 2016b; McBride & Palkki, 2020; Palkki, 2015). Despite this, McBride (2016a, 2016b) found that the hyper-masculinizing of choral and classroom singing continues. McBride's research investigating two gay male choral conductors found the participants were not open about their orientation in their schools because they feared they would lose male singers from their ensembles. This was despite the observation that "for many LGBTQ students and teachers, music classrooms are still one of the most accepting and safe spaces in North American schools today" (McBride, 2016b, p. 40). The research subjects seemed complicit in the use

of "hypermasculine narratives as a recruiting method for boys" and "unaware of their decisions to play into these stereotypes" (p. 40). They appeared to use "words like gay and effeminate almost interchangeably" (p. 40). The researcher reflects that he "purposely promoted an image of (him)self that was anything but stereotypically gay" (p. 40). He created "a version of himself" that was not authentic. McBride concluded, "These actions speak to the power of these discourses. If professionals in our field feel compelled to hide their identity at school simply because of the subject they teach, what messages are we actually sending to adolescent boys, LGBTQ or otherwise, about what it means to be a 'real man?'" (p. 40).

Perhaps some students were ahead of their teachers in this area. Freer (2019) quoted a student re-defining terms such as "real man" to mean more than "hegemonic masculinity" (p. 25). He recalled that, "one transgender boy I worked with… was not bothered by the phrase 'real man' at all. In contrast, they proudly proclaimed, 'I am a real man. And I sing. I'm just a different kind of real man than you are'" (p. 25). Similarly, Freer, criticized some researchers for problematizing the use of athletic imagery in rehearsal as reinforcing "hegemonic masculinity" by noting that many current successful athletes inhabit a range of orientations and gender identities. Freer sensibly suggested foregrounding singing ability rather than gender identity, but the research seems to suggest that negative stereotyping of singers and singing using stereotypical gender tropes persists and is not helpful.

Drawing upon Koza (1993–1994), McBride and Palkki (2020) analyzed choral method textbooks, articles, and websites published between 2008 and 2018 and found the general unquestioning of hegemonic masculinity and androcentrism in relation to the male voice change continued. However, they also argued that the influence of feminist scholars had provoked a more complex and inclusive discourse of gender, which made space for LGBTQIA+ issues.

Recent work has interrogated the persistence of stereotypically gendered approaches to singing amongst adolescents. Kelley (2021) applied Social Identity Theory to the issue and found "that participants will actively pursue activities that align with the values of the in-group and devalue activities that are associated with the out-group" (p. 276). Moreover, when gender was "activated" in a group, the tendency of that group was to adopt more stereotypical behavior. Once gender became activated in a social group, and gender conformity was required to have membership of the "in" group, males, who in Western cultures often saw music activities as "feminine," would first avoid them and if involved, may have tended to perform worse than they otherwise would. As well, Kelley found that "girls may be more willing to cross gender norms to seek perceived benefits or be encouraged to challenge gender roles that they find restrictive" (p. 283). In contrast, Kelly claimed that even if males liked "masculine" music activities more than "feminine" music activities, they may still be reluctant to participate because "they view the entire domain of music as a 'feminine' enterprise" (p. 283). Conductors and teachers should reflect on the circumstances under which gender can be "activated" in a group and the nature of the damaging

stereotyping that can result.

Bullying based on gender stereotypes continues in school music (e.g., Bond, 2017; Kelley, 2021; Palkki, 2020). Rawlings (2016), when looking at bullying in instrumental music, noted that stereotyping by instrument choice continued and lamented the stereotypical and binary gender divisions in music education and research. He claimed, "Music education research investigating gender association and musical instruments has not acknowledged the range of masculinities and femininities in our cultures or considered the underlying distinction between gender, a social construct, and sex, a biological construct, the form of which depends on myriad societal influences and messages" (p. 18). Choral teachers and conductors might respond that, at least in instrumental music, students could choose stereotypically gender-appropriate instruments. Singers did not get to choose their voice and instead are confronted with the decision of whether they will sing at all; a decision which seems to still be swayed by stereotypical gendered approaches and identity concerns. Rawlings made an important call for a more nuanced approach to gender in music which accommodates the "range of masculinities and femininities" enacted and constructed in our students today (p. 18). He was supported by Ashley (2015), who reported "a softening of attitudes and greater acceptance of boys perceived as or who come out as gay" (p. 173). Ashley noted, however, that "society remains fundamentally patriarchal" so "there is a long way to go before" male singers, in particular, are permitted to sing "unfettered by social attitudes" (p. 173).

Gender Identity Formation

Stereotypical gender attitudes to singing have persisted in Western contexts, but reactive, reductive, and hyper-masculine stereotypical gendered approaches by conductors and teachers are not the solution. Gender fluidity and gender choice have been common concepts for students who were navigating the sometimes-tumultuous storms of adolescent identity construction. In 2015, Freer, when investigating changing-voice males in England, Ireland, Greece, and Spain, applied Identity Based Motivation Theory, which "posits that identities are multiple, fluid and constructed within specific contexts as subjectively interpreted by the individual" (Freer, 2015, p. 88). Adolescents act in accordance with these identities. Ashley (2015) explained that "children may be born with the physical bodies of boys or girls, but gender itself and the degree of comfort with the given body are highly fluid social constructions" (p. 107). Further, he claimed, "nowhere is there greater fluidity and uncertainty of identity than amongst the 11-14 age group" where adolescents "try out and discard different aspects of identity" while they develop their own (p. 108). Freer (2015) found that students in England, Ireland, and Greece were bullied for singing, sensed a loss of identity when undergoing voice change, and valued supportive friends and role models at this crucial time. Freer was supported by Parker (2007), who advocated that the "optimal position for adolescents is when they are with their friends… The teacher's role is to foster these relationships" (p. 28). Ashley (2015) added that "many boys already harbor high levels of singing anxiety and are extremely vulnerable to fears of failure" (p. 178). Ashley reflect-

ed that males' voices literally fail them when their identity is most insecure, often leading them to abandon singing altogether. Ashley (2015), Freer (2007), and Leck (2009) highlight the related need for further research concerning the experiences of females and their attitudes toward singing at this stage of their development.

Clearly, researchers have found that students are vulnerable during adolescent vocal development and require support to continue singing in a time of dramatic personal change (Young, 2017). Oakes (2008) said that the teacher must "strive to maintain an environment that is a safe place to sing and experiment with the voice" (p. 116). Parker (2007) remarked, "teens are vulnerable in the classroom" but "if an environment is deemed safe and trustworthy… the singing experience will be one that fosters growth of individuals and their voices" (p. 29). Creating this environment might require courage on the part of the teacher to demand and enforce interpersonal respect and the valuing of others as core attributes of classroom discourse (Young, 2009). Richerme (2016) attested to this vulnerability but encouraged that the music classroom could be a place where this vulnerability could lead to valuable growth. Richerme claimed, "Artistic endeavors offer another way in which individuals might experience the openness and uncertainty that can lead to individual self-formation" (p. 32). She found that undertaking artistic endeavors could provoke emotional reactions and uncertainty. Students may have felt "vulnerable" when confronted by "the uncertainty and openness" required to make qualitative judgments in the process of creating or interpreting music (p. 32). Richerme continued that using the same approach in other areas of one's life can "challenge solidified ways of being, thinking, and acting" as part of developing their identity (p. 32). Of course, each student is different. An experience of vulnerability may have enabled growth in one student and hampered it in another. Richerme gave the example of a teacher encouraging students to access experiences of vulnerability when creating music which deals with their personal lives: "Despite the potential growth made possible by such practices, some students may feel so overwhelmed by their emotional exposure that they resist future attempts to consider and reimagine their evolving selves" (p. 32). Richerme found "when students find their vulnerability met with recognition and acceptance from peers or adults, they may feel a sense of connection with those individuals and increased engagement in their work" (p. 34). This was supported by Parker (2007) who relied on Maslow's model of personal growth and claimed "individuals must be permitted to be themselves so that the inner self can be expressed" (p. 28). Richerme cited Gilbert's (2006) call to "invite the foreign into education while making space for the foreign or strange in ourselves" (Richerme, 2016, p. 37). Gilbert (2006) recommended an "unconditional welcome of gayness in education," encouraging teachers to "accept what is not yet intelligible," and claiming that "knowledge or understanding cannot be a precondition of welcome . . . we are to welcome the stranger before we know who or what he or she is" (Gilbert, 2006, p. 27). Richerme (2016) similarly reflected, "Such a welcome, then, depends neither on comfort nor convenience, and it necessitates refraining from immediate judgment" (p. 37). The call to welcome, acceptance, inclusion, and support is found throughout

the related research base (e.g., Beale, 2017; Gurgel, 2023).

Broader Conceptions of Identity and Inclusion

It seems that this call for inclusion has not yet been fully heard. Bond (2017) presented a narrative of Jamey, a gay cis male countertenor who struggled to belong at university because his male alto voice was not accepted or understood. He described being stereotyped and miscategorized as feminine. Characterizing music or music activities as belonging to one gender stereotype automatically excludes others, and broadening approaches to genders in classrooms and rehearsal rooms could be beneficial. This approach would not be aimed at marginalizing the aforementioned "manly men" and "athletes" from the discourse but would "de-gender" music experiences to open them to all. Palkki (2015), discussing male singer identity, suggested that choral conductor-teachers resist outdated conceptions about singing and masculinity and replace them with an inclusive approach that embraces a spectrum of masculinities in the choral context. He believed that practitioners should "stay current with (or even ahead of) trends and social norms to better align with current conceptions" (p. 26). Wells et al. (2012) alleged that "breaking down stereotypes and releasing students from their gender straightjackets" would enable them to "be valued for who they are" (p. 14).

Hess (2016) argued that "the recognition of complex, intersectional identities is crucial to ensuring that we serve our entire student population" (p. 84). Hess noted that teachers and conductors are "uniquely situated at intersections of multiple identities" (p. 84). Accordingly, "understanding" the complex identities of students "facilitates a deeper understanding of the human relations unfolding in education" (p. 84). This deeper understanding of the complexity of identities enables teachers "to account for oppressions that occur at specific intersections that more singular discourses do not represent well" (p. 84). Hess urged us to strive to understand all our students as a matter of social justice.

According to Hess (2016), reflection on our classroom discourse may help prevent our students from suffering "microaggressions" and injustice. Microaggressions constitute small acts, conscious and unconscious which tend to invalidate or denigrate a particular group or identity. These acts culminate in significant harm and ostracism. Furthermore, because "students do not necessarily have choices about the type of 'teacher talk' and representations they encounter in schools" (p. 87), it is important for teachers to reflect on the identities of musicians who are privileged in music classes and those who are invisible. Hess reminded us that students need to be "represented in their classrooms and validated in teacher discourse" to avoid students having to "continually translate teacher discourse to apply to their own lives" (p. 87). This continual need to translate "is a microaggression—a cumulative harm that wears over time" (p. 87).

Demystifying and Empowering Transgender Singers

Conversations concerning transgender students in schools started receiving attention only in the last decade and continue to emerge. Nichols (2013) published the first research study on trans issues in a major music education journal and advocated that transgender students require specialized attention and are at risk of being mistakenly treated in the same way as people who are lesbian, gay, and bisexual. Silveira and Goff (2016) found music teachers' attitudes toward transgender students were overall positive, with female and/or socially liberal teachers being more positive than male and/or socially conservative teachers. Cates (2019) reported that while teachers might have positive intentions to create a safe space, they may fail to do so. In some contexts, change is more difficult than in others, such as conservative institutions (Freer, 2019).

In transgender choral research, it is reported that the relationship between voice and gender identity is dynamic and might evolve as one's gender identity changes. Some transgender singers were comfortable with their voice type not matching their gender identity. Palkki (2020) retold the story of Sara, who exclaimed, "I'm a girl and I'm a bass and I own that." For others, their voice is integral to their gender identity (Palkki, 2017), and the resulting dysphonia could be a cause of distress.

Music educators are often unsure how to assist transgender students (Cayari, 2019). Advocates have asked music educators to create space to demystify transgender singers, empower them to find their individual voice (Cayari, 2019; Palkki & Caldwell, 2018), and to use their voice openly in everyday life (Nichols, 2013). Rastin (2016) went further to claim that both singer and ensemble (or classroom) are harmed if a safe space is not created for singers who identify as transgender. Gender restrictions on voices have resulted in singers not exploring their full vocal range (O'Toole, 1998; Rastin, 2016). An approach that values and empowers all singers regardless of gender identity has the potential to produce more inclusive ensembles, with stronger singers and better performances (Hess, 2016; Rastin, 2016).

Gender Inclusive Approaches

Analysis of this literature revealed four approaches to including diverse gender identities in the choral music classroom: (a) gender-inclusive language, (b) a welcoming environment and supportive mentors, (c) considered and contextualized repertoire choices, and (d) whole group vocal pedagogy sensitive to individual needs. These four approaches are detailed below.

Language

Adopting language that recognizes diverse and evolving gender identities has been suggested as a powerful approach towards an inclusive choral classroom; perhaps even "life changing" for some (Palkki & Caldwell, 2018, p. 36). Hess (2016) recommended strategic choices that educators can make in classroom discourse such that their language and class-

room environment is inclusive and welcoming of all students, stating "language use may be a mere drop in the bucket of anti-oppression, but it is a drop we have the agency to pour" (p. 96). Hess advised:

- Using language around families that does not assume a nuclear model and which includes single parent, single gender and blended families.

- Carefully framing repertoire to avoid "reinscrib(ing) heteronormative and cisgendered conceptions of love and relationships" (p. 94) (for example not automatically assuming in rehearsal/class that all love is heterosexual).

- "Choos(ing) to openly critique … oppressive discourses with the students we teach" (within the confines of our educational institutions) (p. 94).

- Empowering students to "call us out" and "challenge" us if we use "oppressive" language (p. 94).

Palkki (2015) similarly encouraged choral conductors to model "a spectrum of masculinities … through words and actions" (p. 33). For example, he suggested using "a range of analogies, not just sporting ones" (p. 33), to avoid restrictive gendered imagery. He also recommended structuring choral programs to "support choral singing as something that all types of males do" (p. 32), and not "perpetuate restrictive constructions of masculinity" (p. 33). This advice is supported by Hyndman (2021) who advocated that conductors "avoid stereotyping… in repertoire selection and in rehearsal" (p. 20).

Hyndman (2021) asked for "explicit inclusion" and "explicit acceptance" of diverse gender identities. Palkki and Caldwell (2015) found that transgender singers identified gendered solo parts, the avoidance of gender discussion, dress codes, and misgendering as barriers to safe choral education. Accordingly, choral conductors should refer to voice type, not gender, as a way of nurturing a safe space (Hyndman, 2021; Palkki & Caldwell, 2015; Rastin, 2016). Palkki (2017) recommended that choral educators also consider the structure of ensembles to reflect voices rather than genders. It is recommended that names of ensembles to also reflect voice type rather than gender, such as "tenor-bass choir" instead of "men's choir" (Freer, 2023). Teachers' awareness and use of a student's preferred pronouns and chosen name are significant gestures in welcoming diverse gender identities (Bartolome & Stanford, 2017). Teachers should inquire with students about their pronouns upon first meeting in a way that does not publicly "out" them (Palkki, 2020). In some contexts, these recommendations will conflict with current school and government policy. Teachers need to be aware of these policies and their applications, with recognition that each employment situation offers different flexibility around these issues. Still, teachers may find opportunities to advocate for change via their modeling, leadership, and interactions with other teachers (Palkki, 2017).

Choral educators should use inclusive gender language whenever possible, both to avoid politically difficult situations, and to reflect variances in our students' gender identity (Palkki, 2017). Using non-confronting labels for singers of different choral parts is a matter of having respect for others. There is a long English tradition of males singing alto and soprano, so to call the basses "men" and altos "women" has been inaccurate and exclusionary for a long time. It is unnecessary for the conductor to overuse gendered suggestions in rehearsal. Phrases such as "sing like men" are not necessary to produce a "vibrant" choral sound. Such phrases can easily be replaced by phrases such as "sing professionally," "sing like an opera singer," "sing with a music theatre sound," or any other appropriate imagery. This small adjustment in rehearsal vocabulary would mean that more of the singers feel safe and welcomed. However, it is important not to underestimate the challenges for practitioners, singers, and institutions and to respect the positions of all involved. Practitioners may have personal or religious beliefs that contrast with those of their institution, the parent body, or the students. There are difficult ethical considerations and Freer (2019) reminded us to be sensitive to all those involved to avoid "pulling some of us away from practicing our craft and teaching our young singers" (p. 23). He recommended that we respect the diversity of views and encourage conversations that are "grounded in the very real lives of singers and teacher-conductors" (p. 23).

Environment and Mentors

Research on instructional language implicitly encourages teaching environments where students are valued and supported (e.g., Young, 2009, 2017). Indeed, Harrison and Young (2017) claimed that creating a supportive "village" for students is an important reason for forming a singing group (p. 150). Sweet and Parker (2019) stated that "individuals must feel they are in fact important and contributing individuals to the team" (p. 79) and warned practitioners to be sensitive to the tendency of adolescent females to put the needs of the choir ahead of their own. Parker (2018) noted that choir can provide a supportive environment in which vocal identities can grow. Palkki (2017) stated that these safe spaces must be explicitly created while Sweet (2018) added that students need to feel free to "discuss and advocate for their own development" (p. 146). Some research-grounded material concerning male changing voices in choral settings may provide strategies that can be applied to females, including conversations about the voice change, safe environments, risk taking, and teacher awareness (Sweet, 2015). Hyndman (2021) believed "non-gendered" dress codes could make environments more supportive. As well, there is modern support for earlier views (e.g., Freer, 2009) about the importance of mentors as possible future selves. Palkki (2017, 2020) supported the importance of mentors and names teachers as "important others." Overall, nurturing environments and peer support were both strongly supported in the literature reviewed for this article.

Repertoire

Repertoire should be carefully selected and framed in an inclusive choral classroom. Sweet and Parker (2019) found that "choral repertoire helped ground participants' initial [gender] identities but may also have limited their visions of themselves as their experiences grew" (p. 79). Repertoire selection also gives space for composers to voice their lived experiences and for others to listen (Nichols, 2013; Palkki & Caldwell, 2018).

Choral singing involves acting, and singers can be encouraged to take on different personas or identities in their singing for fun, and to investigate, sing in solidarity with, or interrogate other realities than their own (Davis, 1997). People can appreciate a piece of music without automatically advocating, embodying, or adopting the values within it. Indeed, repertoire from outside the cultural context of the singers, can, with contextual explanation and critique, enable students to broaden their understanding of history, culture, and identity and can empower them to develop their own ideas in these areas (Lord, 2011; Schenbeck, 2000). Rather than censoring the choral repertoire, conductors should be purposeful in their choice, be thorough in the teaching of context, and be vigilant in ensuring that students understand how the repertoire intersects, supports, or transgresses cultural values and beliefs. Harrison and Young (2017) claimed "works that express outdated positions or concepts can be problematized as opportunities for learning" (p. 151). This encourages "reading across the grain" or "resistant reading" which is undertaken in some high school English classes (Macken-Horarik & Morgan, 2008). These are techniques which involve interpreting the dominant or expected message of a text and developing alternative understandings. This process enables readers to interrogate the prevailing attitudes and beliefs in a text and to investigate gaps and silences (Behrman, 2006). Reading texts in this way can generate interpretations which are just and inclusive by foregrounding those who have been marginalized (Young, 2017).

Hess (2016) suggested having students "rewrite" texts to "openly critique these oppressive discourses with the students we teach" (p. 90). Accordingly, with appropriate framing and contextualization, repertoire dealing with romantic love could be performed by singers from a range of orientations. It is worth remembering that many of Shakespeare's love sonnets, which have frequently been set to music, did not specify the gender of the beloved (de Grazia, 1999). A contextually situated approach to the material, where resistant reading has been encouraged, is preferable to denying students the right to experience the repertoire. Indeed, Freer believed it would be going too far to "shun…all repertoire reflecting boy/girl romantic relationships" (Freer, 2019, p. 25). Contextualized approaches are better than pretending that some texts do not exist, and sophisticated approaches leave open the possibility of irony or parody in performance. Careful, nuanced repertoire choice should enable singers to develop the full range of musical ability, to inhabit a broad range of emotions and identities and develop a mature understanding of society, and its socio-historical structures (Marini, 2017).

Singing Technique and Choral Pedagogy

Researchers dealing with singers from a range of gender identities have found that some rehearsal techniques previously recommended as suitable for male-changing voices are suitable for voice building regardless of gender identity (Aguirre, 2018; Cayari, 2019; Harrison and Young, (2017). Similarly, Sweet and Parker (2019) noted that universally applicable practices include (a) maintaining an awareness of individual voices through frequent voice checks, (b) engaging in ongoing educational conversations with singers about vocal development, (c) varying choral singers' voice part assignment, and (d) carefully exercising the full vocal range in vocalizes to encourage singers' emerging and individual vocal identities" (p. 79). Hyndman (2021) also recommended flexibility in part assignment across the repertoire and within pieces.

Palkki (2017) reminded us to build on these general approaches, recognizing that "trans people are not monolithic, and when it comes to issues of voice and gender, there are no one-size-fits-all solutions" (p. 25). Both Palkki (2017) and Aguirre (2018) recommended personalized plans for individual voice development, particularly for a trans man. Rastin (2016) and Hyndman (2021) drew links between approaches for adolescent male changing voices and transgender singers. Rastin stated, "It is extremely important that choristers who require vocal rest or other accommodations during vocal transition are supported by the choir director; pushing the fragile voice may cause damage to the vocal system" (2016, p. 31). Good whole-group vocal training should be informed by sensitivity to individual needs.

A more complex issue is that of singing dysphoria, when a singer finds that their identity and their singing voice are in conflict (Rastin, 2016). Freer (2019) noted that this issue places the conductor in a difficult ethical position and counseled that "our primary focus is the singer and how they use their body for vocal production" (p. 27). He reminded us that "when we assume the role of voice teacher, we place the physical production of singing at the center of our curricular and artistic goals" (p. 27). Regardless of gender, orientation, or identity, there are some things that larynxes will not do. A teacher or conductor might be able in a group situation to extend the range of singers somewhat to assist the singer to achieve a sound that coincides better with their identity (within safe bounds during voice change). Beyond that, basses or tenors wishing to sing (or speak) in the alto or soprano range would need specific training to sing in the cricothyroid muscle dominant M2 range (traditionally known as the "counter tenor" range). This sort of training is more the preserve of the speech therapist and voice coach. Freer exclaimed, "it would be pedagogically and ethically inappropriate for us to assign a singer with a treble-clef tessitura to a vocal part that requires a bass-clef tessitura" (p. 28). His point was that it would be ethically wrong to allow our singers to attempt to sing in ranges that are going to compromise the development and ongoing health of their voices. Harrison and Young (2017) reminded us of the need to protect our singers from the embarrassment that could arise from unsuccessful performance experiences. This requires finesse in choral and vocal training as well as performance planning to ensure singers are able to convincingly perform the music chosen and that they perform

to supportive audiences. For Freer (2019), it was an issue of professionalism; conductors and teachers are "qualified to provide voice education and its musical application through choral singing" (p. 28) but not qualified in other areas. Conductors and teachers should reflect on how much they should involve themselves in the private lives of their students and should be careful not to stray into areas for which they are not trained, especially in modern schools where there are specialist pastoral and counselling staff trained to help students encountering identity challenges; a meddling conductor or teacher might unintentionally cause harm and become part of the problem. Freer advocated that we employ "ethical care" within, but not beyond, our field of expertise to enact "a sense of compassion when working with students who face the intersections of singing, gender, and sexuality" (p. 28).

Conclusion

Research reviewed for this article demonstrates that historical gender stereotyping in choral and classroom pedagogy did not nurture an inclusive learning environment. By adopting the approaches discussed in this article, choral conductors may start to create space in their classroom for positive and inclusive student gender identity development. A focus on music making as a primary concern should empower as many people as possible to feel supported and welcomed as singers. An inclusive approach can involve the refinement of rehearsal and classroom discourse together with the sensitive development of voice placement, voice part, and performance attire within the confines of institutional guidelines and contexts. All singers should feel respected by approaches that are taken. A broad range of repertoire should be sensitively interrogated, and interpreted in rehearsal, class, and concert, to empower students to perform choral and other texts from a position of knowledge and understanding. The learning experiences involved in the choral rehearsals may have a significant bearing on the nature of the performance of the repertoire concerned. A sense of mutual respect, patience, care, and goodwill from all concerned—singer, teacher-conductor, carer, and community—should encourage everyone to enjoy the singing.

As a continually evolving field of research, further investigation is required to understand contemporary gender identities, their relationship with other components of the self, and the possible contributions of choral music education. In particular, research is needed to understand how multiple gender identities can be supported and positively co-exist with one another in choral settings. Palkki (2017) reminded us that choral practices are situated "within specific contexts of time, place, politics, and public opinion" (p. 22). As noted at the start of this article, the research in this field is currently dominated by material from Western, largely English-speaking contexts and many voices continue to be marginalized. There is great potential for research from a much greater range of contexts, cultures, and musical traditions, especially nations with strong singing cultures and different social structures to those currently represented. We strongly advocate for research that is situated in practice and that seeks perspectives from children and young people. Further research is needed in transgender vocal production, pedagogy, physiology, and identity (Cayari, 2019). In par-

ticular, further work is needed to investigate the intersection of gender and vocal identity, and the interaction between the physiological and psychological changes that are experienced by transgender singers. Findings from future research have important implications for initial teacher education (Aguirre, 2018) and ongoing teacher support and development (Silveira & Goff, 2016).

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Women Conductors of College Men's Choirs – Redefining the "Brotherhood"

Meg Stohlmann[1]

Abstract

Collegiate men's choirs have unique and storied traditions dating back to the Civil War and the founding of many prominent colleges in the United States (Albinder & Jones, 2008). Historically, these ensembles created a place for fraternity, brotherhood, and social outlets for young men (Jones, 2010). Consequently, there are few documented instances of women conducting collegiate men's choirs (VanWeelden, 2003). The purpose of this study was to explore the experiences of women conductors of college men's choirs. This research was guided by the following questions:

1. How did women choral conductors describe their motivations for working with college men's choirs?

2. How did these conductors describe the rehearsal environment in their college men's choir?

3. And finally, how did these conductors define the challenges of working with male singers?

The following areas provided focus for themes that emerged from the conductor interviews: their motivations, the rehearsal environment, and the challenges associated with a lack of opportunity and quality literature.

Keywords: Gender, identity, men's choirs, rehearsal environment, women conductors

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Women Conductors of College Men's Choirs—Redefining the "Brotherhood"

A recent article about gender inequity data in the choral conducting profession by the College Music Society (CMS) indicates the percentage of women choral conductors at the collegiate level has decreased over the past 15 years (Farquar-Wulff, 2023). Men's and women's choirs have evolved and changed over the past 150 years in the United States, as society and social norms shift. Additionally, as adolescent gender identity expands to encompass non-binary forms of gender expression some music educators are beginning to examine their role in fostering an environment that is affirming of gender diversity (Cates, 2022; Palkki, 2016). In his survey, Gregory Graf's (2016) interviews with current conductors in the field unintentionally revealed deep-rooted biases and outright discriminatory views held by some notable men's choir conductors against women conductors of male choirs, specifically at the collegiate level. The camaraderie experienced in men's choirs, by men exclusively, was heralded by many of the participants in that study:

> Choruses allow men to connect on an emotional level, and they do not need to worry about the presence of women in an all-male ensemble.…[T]here are experiences unique to each gender and I have observed that many men feel able to show a side of themselves when interacting with other guys. Participation in a male chorus can offer a freedom for men to be fully who they are and express freely that individuality without any reservation. (pp. 13-14)

Additionally, one conductor emphasized the unique connection between a male conductor and a men's chorus, highlighting the rewarding aspect of shaping young men and the gender-specific aspects of the human experience (Graf, 2016, p. 14).

The most telling quotes in the survey came from participants theorizing about the low percentage of women conductors working with collegiate and community men's choirs. Eight participants blamed sexism in the conducting profession and society for the lack of women conductors in this area. Four others attributed it to women's lack of interest in men's choruses. Women's lack of vocal connection with the male singer was another reason cited, with one male respondent mentioning that "it may be intimidating to try and build an ensemble when you can't model the vocal technique" (Graf, 2016, p. 26). The final reason given for the smaller proportion of women conducting men's choirs related to the social connection with the ensemble members. In the words of this respondent, "My best guess is that men feel more comfortable and behave differently around a woman versus a man conductor…. [B]eing a woman in a room full of men may make some female conductors uneasy" (Graf, 2016, p. 26). This final quote by one of Graf's respondents is certainly problematic:

> I think most men do not imagine themselves connecting in the same vulnerable way

> to a female conductor that they are able to connect to a male conductor. I also think the environment that men's choirs usually create may in some ways be a bit unfamiliar to many women; therefore creating/fostering this environment may be difficult for some women. (p. 28)

Graf's survey had men speculating why more women are not conducting men's choirs and proposing that men may not feel as comfortable with a woman leading them. To date, there has been no study on women conductors of male choirs. In this study, voice was given to those women conductors who were currently working in the field and to their singers, documenting their experiences, and examining the themes connected to their stories.

When this study was initially conducted in the fall of 2017, conversations about ensemble singing, identity and its connections with gender were only starting to be documented widely in research. The body of research on collegiate glee clubs and choral singing in the United States was most often written about in binary terms. Additionally, gender gaps were also almost exclusively reserved for binary gender discussions. The focus of this study was to share the experiences of three cis-gender female conductors and their experiences working with college men's (TTBB) choirs. Through the process of this research, one thing became quite clear: how the conductors and members of their ensembles defined their ensemble varied greatly. One ensemble held on to an almost strictly binary identity as a male choir and valued a strong connection to their historical roots and traditions. The other two ensembles were more flexible with how they defined their group and what it meant to be a "men's" choir.

A Very Brief History of College Men's Choirs in the United States

The development of collegiate men's glee clubs in the United States began because of the cultural and political landscape of America during and after the Civil War (Jones, 2010). Today, glee clubs are still a vital part of the ever-changing landscape of choral ensembles, even as voice part-specific choral ensembles grapple with their place in a culture challenging historical gender norms and identities. Along with their music, some of the communal and bawdy characteristics of the European singing societies translated into academia as extracurricular, not for credit classes. Additionally, they were mostly student-run ensembles and historically known for being of very "low quality." Jones (2010) defined this low quality of music as "popular and college songs, appealing to collegiate life, as it was not popular for a social student organization to sing repertoire from the classical genre" (p. 24). When Archibald Davison started conducting the Harvard Glee Club in the early 1900s, he slowly began to change the culture of the group by incorporating more Western European choral repertoire from the art music canon.

One of the most important developments that helped spread collegiate glee clubs nationwide was the establishment of the Intercollegiate Musical Council (IMC) in 1913 by Albert Pickernell, a graduate of the Harvard Glee Club (Jones, 2010). The IMC established an-

nual competitions between glee clubs across the country. The competitions continued until the outbreak of World War I, when many of the men in the ensembles went to war and groups folded. At this same time, colleges of music were being formed at most universities, and some glee clubs became curricular classes providing students credit for participation. Conversely, many glee clubs were forced out of colleges to pave the way for more SATB (mixed voice) ensembles due to the increased enrollment of women.

To maintain their relevancy and support, prominent glee clubs like Michigan, Georgia, Yale, and Harvard traveled extensively overseas and in the United States. At the time of this study, glee clubs and men's choruses were still part of many collegiate choral music programs in the United States, but their prestige and presence varied. Many glee clubs had not maintained ties to their historical roots. For example, when women were admitted to Yale in the 1970s, the glee club changed its designation from an all-male ensemble to an SATB ensemble open to the newly accepted female students. Just like Yale, Harvard University's glee club was opened to anyone who sang the tenor or bass voice part (Graf, 2016). Additionally, many ensembles removed gendered terms from their group names for more gender-neutral or genderless titles.

Methodology

Design

The purpose of this study was to examine the experiences of female conductors of college men's choirs. Each case explored insight into the motivations for the conductors' work with collegiate men's choirs, observation of their rehearsal environments, and pedagogical challenges associated with women conductors working with the male voice. According to Merriam (1998) and Yin (2006), qualitative case study methodology involves an intensive examination of a specific phenomenon, striving for a close, in-depth, and firsthand understanding of the situation. Case studies are the preferred strategy when "how" or "why" questions are being posed, when the investigator has little control over events, and when the focus is on a contemporary phenomenon within some real-life context (Yin, 2006). Instrumental case studies provide insight into a particular issue, redraw generalizations, or build theory; the case study facilitates understanding of something beyond itself (Grandy, 2010).

In this case, the study of women conductors of college men's choirs was instrumental in that it gave a voice to these women conductors and documents their experiences working with collegiate men's choirs for the first time. There has been speculation about the effectiveness of women conductors of college men's choirs, but no one has yet studied the phenomenon. A collective case study involves the exploration of multiple instrumental cases (Yin, 2006). Through this instrumental collective case study, I explored themes that emerged from the following questions:

1. How do women choral conductors describe their motivations for working with a college men's choirs?

2. How do these conductors describe the rehearsal environment in their college men's choirs?

3. How do these conductors define the challenges of working with male singers?

Cases and Participants

To determine how many women conductors were actively working with college men's choirs in the United States, I sent an informal request for names through social media and online professional message boards. This search garnered 22 names. I examined the list of names; researched and compiled a database that included their rank, duties, length of time in their positions, size, type, and location of their universities; and made email contact with each conductor. Responses from the email garnered more specific data about the conductors' careers, work with men's choirs, and interest in participating in this study. I received positive responses from 11 of the 22 women. Based on the responses from the conductors, I felt that this study would not be fully realized by looking at a singular critical case.

According to Yin (2006), multiple or collective case studies allow for analysis within each setting and across settings, making the evidence more robust and reliable. To provide the most robust set of data, I determined that my research should include women conductors in different stages of college teaching with a men's choir—those in the first five years of their careers, those who had between ten and fifteen years of experience, and those with more than fifteen years of experience. I felt it was important to represent a variety of university sizes and locations across the United States to encompass many varied experiences. I believe saturation was reached with these three women conductors based on the differing locations and sizes of the universities and years of experience both in the profession and as conductors of men's choirs.

Case #1 – Lauren (Pseudonym).

The selected participant, Lauren, was in her third year of collegiate teaching. The university where she worked was a state-supported research university in a large city in the southern part of the United States. Lauren served as both a member of the choral and music education faculty. When she was hired at the university, Lauren was given the option to start a men's or a women's choir. Since she had worked successfully with high school men's choirs previously, Lauren decided that she did not want to pass up the opportunity to build and create a collegiate men's choir. In just three years, Lauren's men's choir had grown from 15 to 50 members and was sought after across the campus and in the community to perform for numerous events and audiences. In its second year of existence, the men's choir performed at a state music conference and made its debut at Carnegie Hall in 2018.

Case #2 – Wendy (Pseudonym).

The selected participant, Wendy, has been in her teaching position since 1979. Wendy conducted both the men's and women's choirs and served in a leadership position for the music department. The university where Wendy taught was a small liberal arts religious-affiliated school in a suburban midwestern town. Although Wendy had conducted the women's choir since her arrival at the college, she did not start conducting the glee club until 2000. At the time, the glee club was conducted by a member of the voice faculty and had been struggling to regain its sense of identity after its long-time conductor retired. When the voice faculty member decided to leave the university to pursue professional singing opportunities, Wendy petitioned the dean of the college for the opportunity to conduct the glee club. It went to the university's president for approval and was granted shortly thereafter. The glee club at this school had been an active ensemble since 1907 and has many traditions connected to its storied history. Before Wendy, the glee club had only three other conductors. Her tenure became the second longest in the club's history. The glee club thrived under Wendy's leadership, performing all over the world, including a tour of China in the fall of 2017.

Case #3 – Samantha (Pseudonym).

The selected participant, Samantha, was the Director of Choral Activities and conductor of the men's glee club at a medium-sized, state-supported land-grant institution in the western United States. Samantha had been in her position for 10 years and taught conducting and private voice as part of her faculty responsibilities. When she was hired, Samantha was given the opportunity to choose which ensembles she would like to conduct. She had never conducted a men's choir before and decided that it sounded like a good challenge and opportunity. While she did not start the men's choir at this university, it had only been in existence for about three years before she took over as conductor. Under her leadership, the men's choir performed at regional and state conferences and toured all over the region. It was a well-recognized and sought-after performing ensemble both on campus and in the community.

Procedures

Participant Consent and Engagement

After establishing written consent of their willingness to participate in this study from the three conductors, I set up week-long residencies with each conductor at her university. My goal was to spend a week with each conductor at the beginning of her school year to observe how she established the community and culture of her men's choirs. Additionally, I asked each conductor to identify three to four members of their ensemble who represented new members in the group; music majors, non-music majors, and long-time members in leadership positions. Interviews with the singers took place away from the music building at

their convenience throughout the week. Interviews were set up with each conductor during the week-long visit, along with videotaped observations of her rehearsals. In addition to the formal interview, numerous opportunities arose during the residency for informal conversations and observations of each conductor's daily schedule and duties.

Data Collection Methods

To ensure a thorough representation of each case, data were collected in multiple ways, as is customary in qualitative case study research (Stake, 2010). The first method was through direct observations of each conductor during her rehearsals and other teaching activities throughout the week. Video recording of the choral rehearsals was used to allow for a more in-depth analysis of the data after the fact. Semi-structured and open-ended interview protocols allowed for standardization of data and the flexibility for new data to emerge from informal conversations. To provide comfort and ease for the participants in the case during the interviews, students were met at a location of their choice, anywhere on or off campus, and at a time convenient to their schedules to allow for maximum flexibility. The conductors were also interviewed in uninterrupted two-hour blocks of time in a location of their choosing to allow for their maximum comfort. The purpose of the study was outlined for each participant, and they were allowed to ask questions to abide by the ethical principle of beneficence (Kvale & Brinkmann, 2009). Each interview was transcribed diligently with the intent to represent each participant as clearly and authentically as possible. Along with transcriptions of each interview, member-checking, researcher's field notes, and reflective journaling were crucial to the triangulation of the data used to identify emergent themes.

Data Analysis

The data underwent analysis using the constant comparative method, involving a comparison of data sets to discern both similarities and differences (Merriam, 1998). Copies of the interview transcripts were sent to the conductors to establish credibility and validate the research (Stake, 2010). Additionally, all participants were given the opportunity to request that an alias be used to maintain their confidentiality. Audio transcriptions of interviews with all the conductors and singers were coded. I used in vivo coding for the first cycle of data coding (Saldaña, 2016). To better organize the array of in vivo codes collected, I cut and pasted them into a separate document. From this document, I utilized pattern coding for my second cycle of codes. Using these two cycles, the words of the participants were grouped into pattern codes and, ultimately, themes.

Theoretical Framework

This project was conceived and guided by a theoretical framework of liberal feminism. While more abstract in philosophy than other branches of feminism, such as radical or Marxist feminism, liberal feminism anchors its ideology on the absolute guarantee of free-

dom for everyone, including women. This view holds that in order for all women to have access to personal autonomy—or a life of their choosing—critical examination of the structures and mechanisms that maintain status quo gender hierarchies must be undertaken (Cudd, 2006). Limitations on women's agency are due to a gender system where patriarchal norms have been established and remain oppressive (Okin, 1989). The work toward liberation and freedom is to identify patriarchal traditions and dismantle them, thereby allowing autonomy for everyone (Cornell, 1998). In the 2009 book, *Wisdom, Wit and Will: Women Conductors on their Art*, conductor Sharon Hansen explains the positionality of female choral conductors:

> Historically, women have been visible and well accepted as choral conductors primarily only within the realm of elementary, middle school, small high school, small college, or sectarian institutions…as children's choir directors (although not typically boy choir directors), as junior high and middle school choir directors, as women's chorus directors, and as training choir directors. (p. 214).

Uncovering systematic differences in gender representation may allow women to be less likely to self-eliminate from positions that do not align with societally accepted norms.

Trustworthiness and Positionality Statement

Demonstrating Trustworthiness

To demonstrate the trustworthiness of my research, every effort was made to document the processes and procedures employed for this project. Member checks were utilized with the interview transcriptions to ensure the validity and credibility of the data collected. Along with member checks, data in the study were also triangulated. By analyzing and crosschecking my data across a variety of sources—including but not limited to video recordings, interview transcripts, field notes, reflective journal entries, and firsthand observations—I worked to construct the validity for this case (Yin, 1994).

Researcher Positionality

As a former conductor of a collegiate men's choir, I acknowledge the possibility of my previous experiences casting an unconscious influence on my interpretation of the data. It was my goal to remain as unbiased as possible, and I made a conscious effort to be a silent observer during my residencies at each school. It is also possible that my gender as a female researcher could have limited some of the data collected.

Personal Background and Engagement

As a public high school choir teacher, I started a men's choir to help grow my choral program and provide better individualized vocal support for my male students. When I

arrived at the University of Washington and found out about the men's glee club, I knew that I wanted the opportunity to work with them. In my second year I was afforded that opportunity and co-conducted the ensemble for a year. As the first women conductor of the group, I was a little apprehensive that I would not be accepted into the club. But that quickly melted away after the first rehearsal.

As an early career academic, I was fortunate to be the conductor of a collegiate glee club. The specific glee club that I conduct was founded in the 1930s and had a strong connection to its alumni and traditions. We had singers of many backgrounds, gender expressions and levels of comfort with their singing voice. This had become my passion and mission, and I would not have had the confidence to lead and guide in this way without the hard work of the trailblazing conductors like those documented in this study.

Case Study Findings

Theme 1: Trailblazers in a Male-Dominated Choral Community

The three conductors studied had different backgrounds and paths that led them to conducting collegiate men's choirs. Trailblazing was the overall theme for the conductors' motivations for working with college men's choirs. A trailblazer is a person who makes a new track through wild country; a pioneer; an innovator. Subthemes encompassing their motivations included:

- **Challenge and Opportunity**: Lauren chose to start a college men's choir when given the opportunity to pick between a men's or women's choir. Wendy sought out the opportunity to bring back the prestige and quality of the historic glee club despite challenging the historical gender roles valued by her university. Samantha chose to conduct the men's choir over other ensemble choices because it was something new and "sounded fun."

- **Passion**: Despite varied motivations, all three women embraced the idea of tackling something different and challenging and, subsequently, found a passion for men's choirs and the communities these choirs built.

Theme 2: Embracing Challenges and Opportunities

Each conductor had unique circumstances that allowed for the opportunity to conduct the men's choirs at their universities. When I asked her why she chose to start with a men's choir, Lauren said,

> Selfishly, I have always really been interested in men's choruses. I had a lot of successes with men's choruses from middle school, all men's choruses through high school and I had never really had the opportunity to do collegiate…and that's really the field that I kind of wanted to make my niche in.

By comparison, Wendy started conducting the men's glee club after she was a well-established and respected member of the faculty. When I asked her about her motivations for seeking out the position with the men's glee club, she stated, "I came here in 1979, and in 2001, I started conducting the men's glee club, and I look at that as part of the mission of saying that women can do this." Wendy knew she could make a difference with the men's glee club and increase the quality and sense of community for the male students. She earned their trust and loyalty because they were "feeling pretty good about how they were sounding."

Samantha's position at her university afforded her access to opportunities like conducting the men's choir because she was already in a top leadership position as the director of choral activities. When she was hired, Samantha was the only choral person on the faculty. She explained:

> They were going to hire an adjunct to take over the choirs I couldn't have in my load, so the department head at the time said, of course we want you to conduct the collegiate chorale because it's the top mixed ensemble. It has the highest profile. And then you can choose whatever else you want to conduct. I thought, I've never done a men's choir, so that sounds fun. I'll do that. And it scared me, and I was like, ok, sounds good.

Each of these women embraced the potential challenge that came with conducting a men's choir and jumped at the opportunity, making them trailblazers.

Theme 3: Passion for Music and Teaching

All three conductors showed an immense passion for their profession. This passion was evident through their responses to the interview questions and in my observations of their rehearsals. The passion exhibited by Samantha was shown in her interview with me. She would light up every time she spoke about her men's choir. When I asked her about her own career goals and aspirations, she told me:

> So, I think of men's choir as the highlight of my week, my three hours where we just have joy. Whether it's in music making or joking around or just being goofy, I love those three hours a week…. So yeah, I am completely passionate about it. And as far as the future, I always want it to be part of my future. Always, always.

These three conductors were not just passionate about their men's choirs, but also about their roles as teachers and mentors.

Theme 4: Authenticity is The Key Ingredient to Success

In Graf's (2016) survey of postsecondary and adult men's chorus directors, one of the male conductors stated that "female conductors of men's choirs that he has observed tend to be 'larger-than-life' people with exceptionally strong personalities" (p. 28). I found that while each conductor was successful with her men's choir, each had her own individual style. In fact, with both Wendy and Samantha, I had the unique opportunity to observe their work in front of two different types of ensembles—Wendy conducting the men's and the women's choir, and Samantha conducting the men's choir and mixed ensemble. In both cases, there was very little change in their demeanor and delivery of material between the two ensembles. Wendy's style was matter of fact, quick witted, and focused on delivering sound vocal pedagogy to her choirs. She allowed little time in either rehearsal for downtime to talk or socialize. This held true with both the men and women's ensembles.

The same was true for Samantha's choirs. One aspect of Samantha's physicality that positioned her to connect easily with her male students was that she was a world-class powerlifter. All the members of her ensemble interviewed referred to her physical prowess and the tradition of Samantha bench-pressing the smallest freshman singer at the fall retreat. While Samantha's physicality gave her a way to connect with her male students, it was interesting that she observed not all her students wanted to participate in strength challenges. It seemed that initially Samantha looked to relate to the men in her ensemble through a perceived value that her singers would have on competition and athletic prowess. This was based on prior success with similar activities and probably her own unconscious bias about what young men would find appealing. However, as she became more aware of the unique values and interests of all the members in her ensemble, Samantha's viewpoint expanded and changed. This change in understanding has fostered a deeper connection between the members of the ensemble and Samantha because she found ways to connect each individual singer.

Not only do women conductors have to confront questions relating to their personality and demeanor remaining authentic, but they also must navigate issues surrounding professional dress and appearance. In Anna Edward's (2015) dissertation, *Gender and the Symphonic Conductor*, she demonstrated that concern over what to wear for women conductors can be a daunting task. In her words, "women have had to concern themselves with deciding what to wear to avoid potential judgments such as too alluring, too feminine, or too masculine" (p. 70). In each interview, we discussed the stereotypes that women must navigate as conductors regarding their dress and demeanor. Lauren stated,

> I'm part of their family; it's a partnership. I don't have a choir without them, and they don't have a choir without me. If I separate myself too much as the conductor, that family doesn't work. And so, I think that you need to stay true to who you are as well as what your look is and what your feel is, but also define what you want to be perceived on stage. I mean everybody knows I have my badass red high heels.

Similarly, Wendy explained, "I still wear my pearls when I'm on stage with the guys. I mean, I don't wear a tuxedo. But I have started wearing a tie with that…so I can't tie the tie, my husband has to tie it for me." Samantha shared the following exchange with another female colleague:

> When I first knew that I was conducting the men's choir, I was talking with a female colleague, and I said I am a little nervous about this and she told me, all you have to do is wear short skirts and high heels and they'll love you and I didn't know what to say! I try to look feminine when I conduct, but I do wear pants when I conduct, because that's a choice that I make...because I do feel more comfortable in that music, not in a skirt.

While these conductors had to contend with issues of dress and appearance, each woman found ways to represent herself in an authentic way that did not necessarily conform to gender norms. One of Wendy's students commented positively about her attire saying, "She dresses up in the suits when we go places, and she wears the blazer and the tie…she makes a very good point of building rapport with us." This observation points to the importance the singers placed on feeling connected to their conductor.

Theme 5: Rehearsal Environments Build Community

The themes that emerged from an examination of each choirs' rehearsal environment included community, novice singers, and empowering student leadership. Within the larger theme of community, subthemes of family, traditions, and acceptance permeated the language used by both the conductors and students.

Community of 'Brothers'

An examination of the literature on the attraction of the all-male choral experience to male singers highlights the unique community of brotherhood and common identity that is found within these ensembles (Freer, 2009a; Graf, 2016; Ramsey, 2013). The community built by each woman conductor in this study shared many of the historical traits of a collegiate men's choir.

The Importance of Family

The history of men's choirs in the United States shows that most started as extracurricular groups. Lauren's ensemble was both curricular and extracurricular. It was not required for music majors, which can make recruiting more challenging. She was very flexible with her schedule and expectations for rehearsals. In fact, to attract some of the instrumental music majors, she held extra rehearsal sections just for them outside of her weekly rehearsals so that they could participate. In short, Lauren's mission was "to be as open as possible.

And still make fabulous music with wonderful musicians."

The interviews with Lauren's students echoed her definitions of community in the ensemble. One student commented, "It's just really fun, and I've learned that it's an extremely big family, a very dysfunctional family, but it's a family." I asked this student to describe the rehearsal environment in his own words, and he told me about "the circle. We always rehearse in a circle unless we're setting up for an actual concert…but usually it'll be in a circle, so she can hear in a more intimate setting." I was able to observe the first rehearsal of the semester with Lauren and her ensemble, and I saw the effect the circle had on building the community in the ensemble. Lauren positioned herself as part of the circle. The piano was even part of the circle. The effect was subtle, but the results ensured that no one was left out and all members, including the director, were connected.

Connection to History and Traditions

Wendy's glee club had existed since 1907 and came to her with community traditions and rituals. Her case provided a chance for me to observe the dynamics of a woman conducting a glee club that had held onto many vestiges of its history and celebrated them as part of its culture. When Wendy took over conducting the ensemble, she made a point to keep a lot of the traditions alive. Wendy understood the importance of the community of "old men," and their connection to the current ensemble ensured continued support of the glee club in the future.

The rehearsal environment was full of these traditions, but none of the current members knew the stories behind their origins. Even Wendy did not know the origins of some of the traditions, except that they had always been a part of the culture of the club. For example, if someone grabbed the wrong number folder, they were to announce it in rehearsal and all the gentlemen yelled "Shambles!" in unison. While they could make the ensemble feel a bit more like a fraternity than a choir, one of the students shared what seemed to be the core mission of the ensemble: "It's a great place to grow in relationship with each other and with God."

Samantha's students, many of them first-time choral singers, emphasized this tight-knit community in their ensemble. Said one, "There's no judging or anything of that nature. It's, you know, a safe place but at the same time, we're very dedicated to getting the work done and making sure we're prepared. And I think it's a good balance of the two." I asked one of the students to describe a rehearsal in the men's choir. He told me, "I have four older sisters, so I never really had like a brother, and the men's choir is kind of more like a brotherhood."

Creating a safe place for novice singers

In response to the desire for more inclusivity of all-gender expression in the choral classroom, I have observed and personally been involved in the process of changing the names of men's and women's choirs from their gendered names to more gender-neutral titles. Lauren was purposeful in creating a community that encourages all expressions of gender

and not just archetypal "maleness." The commitment to creating an open safe space was also reflected in the music she programmed for the ensemble. As she explained,

> It's not these sea chanties all the time. It's not these "Yale Glee Club" series types of pieces anymore. I think that the topics we choose to discuss and the text we discuss is different now than it was twenty years ago. I think language is evolving and needs to continue to evolve. The openness and willingness not to shy away from the transgendered voice, and creating that environment needs to be ok…because they just want a place to feel, I hate to put quotes on it, but "normal."

Across the three cases studied, the theme of novice played a vital role in the rehearsal environment of each men's choir. Lauren's mission to create a non-auditioned choir where everyone was welcomed to sing required her to create an environment that welcomed highly skilled and trained singers along with novices. Most of the singers in Lauren's choir were non-music majors. Because of this, Lauren focused on selecting literature of varying levels and teaches by rote, especially at the beginning of the semester. One of Lauren's non-music-major singers reflected on a moment such as this as the defining moment for his commitment to the ensemble: "We didn't have sheet music, and I had never sung but by the end, it was all around me like this melody we had created, it was very beautiful. I had never been in something like that, so yeah, it was a big moment for me."

Many of Lauren's students commented on how much they respected her conducting and teaching abilities. One stated, "She is able to intertwine basics with musicality." I asked all the singers in the study if they ever felt like their needs as male singers were not adequately addressed because their conductor was female. One of the singers stated:

> The only thing I've noticed is that she can't really model for us. And that is the most, like, that's the thing that I understand for a lot of people can be an issue. But I notice that's the reason why she is so much more creative with everything else because it's very easy if you're a man to be able to model and be, like, sound like this. Whereas, if her voice literally, physically, can't do it, she must, like, plant that seed in other people. I think that fosters leadership within our group a lot more. I think it's an opportunity, I don't necessarily think that it's a negative.

Both the novice and more experienced singers interviewed from Lauren's choir expressed confidence in Lauren as both a conductor and voice teacher. They uniformly agreed that they never felt like their needs as male singers were not adequately met by a female conductor and reiterated that the community built in the choir provided a space where they felt safe and supported by their peers to explore their own voices and grow as singers and musicians. When I asked a student of Wendy's if he thought it was a disadvantage for women to work with male singers, he had an interesting response:

> I kind of like the opposite because I feel like she would hear stuff in our voices that if a male was singing and directing, you're kind of blind to how your tone is, and she can tell that our tone is so different from what she would sing.

Throughout the interviews, Samantha's students all spoke about the strong vocal technique they were learning and how important it was for them to sing with their whole body. When I asked the interviewees if they ever felt that their needs as a singer were not adequately met, they all quickly said no and went on to reiterate how knowledgeable Samantha was about the voice. The president of the men's choir told me that one of the reasons he joined the men's choir was to become a better singer. I asked him if he felt like he had achieved this goal, and he stated:

> I hoped to become a better singer overall, but I didn't know just how much it would help me because she is so good at, like, finding the small things to work on with the whole ensemble…she knows how to get people to sing to their full potential.

It was interesting to observe that part of the strength of the men's choir communities at each university stemmed from the rehearsal environment, creating a safe place for untrained and insecure singers to explore their vocal potential. The rehearsal environments established by each conductor were unique and yet shared some common themes. Additionally, the students interviewed uniformly viewed their conductors as experts in the field and did not feel like their needs as male singers were not met due to the gender of their instructor. In fact, some described it as a benefit, an example of strength in teaching and adaptability.

Theme 6: Challenges of Conducting TTBB Collegiate Ensembles

Each conductor was asked her opinions on why there are so few women conductors of college men's choirs and to outline some of the challenges associated with conducting men's choirs. The themes that emerged and were explored include lack of opportunity and lack of quality repertoire. Lauren's answer focused on the divide between men and women in college teaching jobs:

> I think that it's been a good ol' boys club for a long time. Most of the DCAs will conduct the top mixed choir and the men's chorus, and then the women get the second choir and the women's' glee. I think here, to be honest with you, if I hadn't started the men's choir, I don't know that I'd be conducting it.

Wendy echoed Lauren's sentiments about the lack of women conductors of college men's choirs. She felt strongly that there are two main reasons for their absence. She told me, "I think there's a bias against women conducting at the college level generally, except for wom-

en's choirs." I asked her if she had personally experienced this bias and she said, "I look back at jobs, you know, where I was as well qualified as men, and I didn't even get a chance. I've also been kind of told, well no, because this is your expertise [referring to women's choirs]." I asked Wendy what advice she would give a woman conductor and she said, "You gotta be good. You gotta be better than the men. I hate to say that you do, but you must be. You must be yourself, love what you do, and be good at it."

Samantha was able to overcome this potential bias because she was hired as the director of choral activities. She got to choose the opportunity to conduct the men's choir. I asked her what advice she would give to a female conductor that wanted to work with a men's choir. She said to "Do it! It'll be scary, but it will be the most rewarding musical, spiritual, and social experience." Her mantra was simple, yet poignant: "Good teaching is good teaching, good singing is good singing. If you teach them well and you teach them how to sing, that is valuable to the individual and valuable to the ensemble."

The three conductors interviewed for this study all had varying levels of time and experience working with college men's choirs, yet a consistent theme emerged when discussing some of the challenges they faced: repertoire. Wendy had worked with the men's choir and in choral music the longest of the three conductors. She was in her thirty-eighth year of collegiate teaching and admitted to still struggling with finding quality repertoire that works. The exploration of music with challenging texts and deeper meaning was changing the formulaic programming of historical men's choirs. Lauren's programming and ideas on appropriate repertoire were the furthest removed from the "men's choir shtick." In her opinion, "Society's changing. And I think topics that are being discussed and literature that's being written is changing. It's not these sea chanties all the time, not these Yale glee club series types of pieces anymore."

Because Lauren did not want to use some of these traditional men's choir pieces, she sought out composers and commissioned them. As society continued to evolve, some of the older pieces in the TTBB canon could be viewed as problematic. For example, one of the students interviewed told me that while he enjoys being a part of the men's choir, he also struggles with the perception of sameness and exclusion that an all-male group can inadvertently create. The singers and conductors interviewed were all in agreement that quality repertoire is one of the key ingredients to the appeal of a men's choir experience. However, the conductors in this study faced the challenge of finding consistently high-quality repertoire for their singers. The conductors suggested that more composers need to write music for men's voices that uses quality texts, embraces all expressions of gender, and consists of vocal lines tailored to bring out the beauty of the male instrument.

Conclusions and Implications

In this study I examined the experiences and challenges of three women conductors working with college men's choirs. As a conductor of a collegiate men's choir, I acknowledge the possibility of my experiences casting an unconscious influence on my interpre-

tation of the data. It is also possible that my identity as a cis-gendered female researcher could have limited some of the data collected. Another limitation of the case study was the duration of one-week residencies at each location. While I was able to observe multiple rehearsals and other events, such as informal meetings and social gatherings during these residencies, it was challenging to document a whole culture in such a short period of time. A longer observation would have been ideal and should be considered for future research. The findings of this study should not be generalized to other choral settings or teachers. However, it is my hope that the interpretations of the research questions may provide useful insights for other choral music educators.

The women in this study were motivated by the challenge that conducting a collegiate men's choir provided. Each demonstrated a drive and passion to overcome any perceived bias and sought out opportunities for herself. They also shared a strong sense of self, which gave them the confidence to (a) found a men's choir, (b) seize an opportunity to conduct a historic men's group, and (c) choose to conduct a men's choir when other options were available. Each woman demonstrated passion for different aspects of conducting their ensembles while maintaining a strong connection to authenticity. They did not change who they were to fit a stereotype of what women should do to be successful in front of a men's choir. All three conductors wanted to connect with their choirs while onstage through their dress and appearance. Each was able to do so without losing connection to their authentic self.

Each rehearsal environment and community created by the women in this study was different. However, they shared many commonalities with the traditions found and studied in men's choirs by Faulkner (2004), Freer (2006, 2009b), Ramsey (2013), and Williams (2012). The themes of community, brotherhood, family, and safe place were identified in each of the three rehearsal environments. It was interesting to discover through the interviews of the students that none of them felt like their needs as a singer were not met by a women conductor. In fact, many spoke of the strengths of their conductor's ability to find workarounds to overcome their inability to model. All the women felt strongly about the importance of understanding the voice. This proved to be especially important in these ensembles because all three women worked with several novice singers and first-time choral participants.

In conclusion, there were no perceived or verbalized negative feelings or concerns shared by the singers about the gender of their conductors. This examination of rehearsal environments challenges the concepts of community and brotherhood. Is it still a brotherhood when there is a woman present? In Ramsey's study, brotherhood was defined using words such as support, pride, and camaraderie (Ramsey, 2013). Not once was the term maleness used in relationship to brotherhood. If we then use a genderless definition of brotherhood, its benefits can be felt by all those who have experienced the support, pride, and camaraderie of any kind of community. The work of this study has shown that there is no magic formula for creating a rehearsal environment that will automatically invoke brotherhood. Rather, it is imperative that the conductor be authentic and true to their own strengths and passions and feel limitless when seeking out opportunities to conduct and lead, regardless

of their gender.

All three of the women in this study shared a strong sense of self and the courage to be trailblazers as conductors of college men's choirs. They created communities where their male students felt safe to explore their voices and express themselves through music. The singers spoke of the brotherhood and community in their choirs and how the ensembles were more like a family than a class. Their experiences mirrored those of other men's choir participants studied who had male directors. The only difference in their experience was that their brotherhood contained one sister. The challenge now is to not only empower women conductors to seek out all conducting opportunities, but to intentionally work to invite more women to conduct all types of ensembles.

Baughman's (2021) survey of women in collegiate choral conducting showed that, in general, men tended to be considered better conductors and were taken more seriously than women. McClean's (2023) examination of choral literature performed by all-state mixed choirs from 2000–2020 also revealed that only 23% of the guest conductors were women. McClean looked more intently at the data from individual states. Even more gender disparities emerged, including four states that had hired only one female conductor for an all-state mixed choir in 20 years. Another illustration of the gender disparities present in collegiate choral conducting was Amelia Nagoski's (2017) statistical analysis of the gender of conductors for invited choirs at the 2017 ACDA national convention. The data collected showed that, overall, 72% of the conductors were men (Nagoski, 2017). Additionally, only three percent of women conducted groups that she labeled as "non-conforming: women conducting an ensemble that is something other than youth, trebles, or women" (p. 2). In contrast, 26% of men conducted "non-conforming" ensembles, perhaps because "men are allowed to cross over and conduct choirs that tend to be associated with women…In fact, there are more men conducting youth, trebles, and women than there are women conducting at the conference altogether!" (p. 2)

For real change to occur, more women are needed in positions of power in the collegiate and professional choral world to ensure that future generations of women conductors see themselves represented in all aspects and types of choral ensembles and positions. Additionally, data need to be readily available from national choral organizations that track gender demographics as they relate to job title, work environment, pay, and education. Our profession needs to stop hiding behind tradition. Rather, we must thoughtfully reflect on the past and intentionally move forward with new ways of thinking about the profession. It should no longer be trailblazing for a woman to conduct a collegiate tenor bass ensemble anymore. If we are willing to expand our mindset on the singers in voice part-specific choirs, then it is equally imperative that we examine our bias toward the person on the podium.

While the interviews reported here were of cis-gender individuals who identify with their birth-assigned sex, it is my hope that this project opens to a more inclusive representation of the entire gender spectrum and its implications on the future of choral singing in voice-part specific ensembles. As stated by Lamb and Dhokai, "If we are to approach a world where

we embrace equity and equality with commitment and compassion, we must start with the recognition of actual people and experiences" (2015, p. 124). I hope that this research can serve as a bridge in the ongoing conversations surrounding ensemble configurations in choral music.

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Article

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Embodying the Music: A Survey of Choral Music Educators on Conducting Injury and Wellness Techniques

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Abstract

The purpose of this exploratory study was to identify the most common choral conducting-related injuries, and determine the ways conductors completing the survey have adapted their physical gesture to accommodate or avoid pain and discomfort. Utilizing a researcher-designed online survey, we asked choral music educators to identify and describe musculoskeletal and vocal injuries sustained throughout their careers, and the effects of these injuries on their conducting and teaching practices. Results from respondents (N = 75) indicated a high prevalence of upper-body repetitive stress injuries amongst participants caused by classroom ergonomics, misuse and overuse, poor technique, and tension. In response to their injury or injuries, participants reported altering alignment, change of technique, rest, and avoidance. Preventative responses included classroom modifications and therapy and/or treatment. We discussed the workplace culture of the typical American choir conductor, the state of wellness education in pre-service teacher training, and considerations for future research. Such findings could help inform conductors, teachers of conducting, and medical providers to understand more about injury prevention and management for conductors.

Keywords: Conductor, choir, occupational injury, prevention

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Researchers have established that choir ensemble directors (used interchangeably here as choral directors, vocal music teachers, or choral conductors) encounter a wide range of physical rigors including repetitive motion of conducting (Daley et al., 2020), standing for multiple hours on hard floors (Cham & Redfern, 2001), functional voice disorders (Byeon, 2019; Naqvi & Gupta, 2022), and other occupational risks such as moving equipment and student-inflicted injury (Schofield et al., 2017). Practitioner articles have instructed music educators in a variety of injury response and prevention including stretching and breathing (e.g., Wis, 2021), body mapping (e.g., Johnson, 2008), vocal health (e.g., Salvador, 2010), and self-care (e.g., Kuebel, 2019). There are extensive bodies of extant literature within performing arts medicine research regarding musician injury and prevention and specifically vocalist injury and prevention. Empirical research addressing injury and prevention for choral conductors, however, is less prevalent.

Instrumentalist Performance-Related Injuries

Many scholars have examined Performance Related Health Problems (PRHPs) for instrumental musicians (Cruder et al., 2021; Guptill, 2011; Heinan, 2008; Jacukowicz, 2015; Shoup, 2006; Yang et al., 2021; Zaza, 1997). PRHPs include physical problems like musculoskeletal disorders, peripheral nerve entrapment syndromes, motor dysfunction, hearing loss, and psychological playing-related health problems like musical performance anxiety and occupational stress (Zaza, 1997). Often, performing artists display several co-existing musculoskeletal problems as initial problems may evolve into more complicated problems involving multiple regions of the body (Shoup, 2006). Psychosocial aspects of musicians' work, such as long hours, high-demand jobs, low control and influence, lack of social support, and work content, may play a role in the development of musculoskeletal problems (Jacukowicz, 2015). Gentsch & Kuehn (2022) hypothesized that negative body memories, such as the stress mentioned above, get stored in memory and have the ability to contribute to the development of somatic manifestations. Although authors have discussed the biomechanics, common pathologies, and treatment and prevention strategies PRHPs for piano, strings, winds, brass, and percussion (Cruder et al., 2021; Guptill, 2011; Heinan, 2008; Jacukowicz, 2015; Shoup, 2006; Yang et al., 2021; Zaza, 1997), the conductor as a musician is often left out of the conversation.

Playing Related Musculoskeletal Disorders (PRMD) in instrumental musicians are most often overuse injuries that affect the upper extremities (Yang et al., 2021). Scholars dispute the prevalence rate of these injuries depending on their definition of playing-related injuries, response rates for their surveys, and methods of data collection (Guptill, 2011). For example, Yang et al. (2021) reported a prevalence rate of 50% to 88%, while Bosi (2017) reported a prevalence rate of up to 93%. Regardless of instrument, chronic injuries from overuse, misuse, repetitive and non-ergonomic movements may result in muscular imbalance, tightness, or pain. Changes in practice schedules, technique, and repertoire may further exacerbate the general risks that may affect instrumental musicians (Yang et al., 2021).

Injury and patterns of pain from PRMD within instrumental musicians affect not only professional musicians and educators, but also music students. Cruder et al. (2021) surveyed 340 university music students with current musculoskeletal disorders in order to identify patterns of pain location and determine associations between pain patterns and student characteristics. The researchers identified five patterns of pain location including wrist pain, widespread pain, right shoulder pain, both shoulders pain (left concentrated), and neck and back pain. Participants who identified as women, who perceived a higher exertion rate, who reported psychological distress, and who shared a lower level of self-efficacy reported the largest number of associated variables.

Guptill (2011) completed a phenomenological inquiry in which they examined the lived experience of instrumental musicians who had suffered from injuries related to playing. As musicians' identities are often linked to their instrument and ability to perform, Guptill related that playing-related injuries "can be emotionally devastating and can leave musicians destitute" (p. 84) since many musicians typically are independent contractors receiving minimal pay with poor access to healthcare. Guptill's interviews with ten professional musicians found that because music was integral to participant identity, disruption in music-making impacted their perception of time, body, space, and social well-being. When participants were engaged in music, the perception of time passed much more quickly compared to when they became fatigued or discomforted, which impacted their perception of time more negatively. Likewise, when they were engaged in performing music, their perception of bodily discomfort was less and seemed to be tied to the type of performance and the difficulty of the piece being played. For some individuals, the physical practice spaces where they felt emotional and physical pain became a trigger for them later. Additionally, participants described either an integrative supportive network of colleagues or the opposite, which was kept as a secret, causing isolation. In many cases, the lack of reporting was the result of fear that they would become unemployable.

Pianists, including those choral conductors who play piano for their ensembles, may encounter a variety of piano-specific injuries. Shoup (2006) explained that due to the repetitive nature of playing piano, piano players are "especially susceptible" to muscle strain of the hand or tendinitis (p. 858). Risk factors for PRMD in pianists include female sex, high stress, increasing age, previous shoulder and elbow injury, and small hand size (Yang et al., 2021). Yang et al. postulated that there have been increased risk for strain and overuse with smaller hand size because of excessive reaching and wrist movement. Additionally, poor playing posture, a lack of warm-up, and intense repertoire may have led to performance-related injury.

Vocalist Performance-Related Injuries

The research on vocal performance-related injuries has mainly focused on vocal injuries, including muscle tension dysphonia, vocal nodules, vocal hemorrhage and polyps, and chronic vocal deterioration (Jahn, 2009). Due to the proximity of the larynx to other major

organ systems, singers have been especially vulnerable to vocal injuries related to their respiratory, gastrointestinal, and endocrine systems. General health issues like gastric reflux, respiratory diseases, and medication side-effects have shown potential implications for vocal health.

Haben (2012) characterized a trained singer as a "vocal athlete" (p. 167). As vocal athletes are so tuned in to their instrument, they often are able to identify changes in their vocal quality quickly. The more experienced a singer is, Haben asserted, "the earlier and subtler the voice disturbance tends to be at presentation" of changes (p. 165).

Very few studies have examined the vocal dose of choral singers. Gorham-Rowan et al. (2017) examined the effect of a tapered rehearsal schedule on choral singer voices. The researchers observed increased practice time for choral ensembles prior to performances, and posited that while increased practice time may have improved performance abilities, it may have negatively affected vocal quality. They suggested a tapered rehearsal schedule prior to performances that may lighten the vocal load for singers. Their preliminary study with a small number of participants yielded results that suggested that a tapered rehearsal schedule may benefit some performers, potentially improving their vocal quality.

Conductor Performance-Related Injuries

Ensemble conductors, like other musicians previously discussed, are also susceptible to injury. Due to "the facilitative nature of the conducting instrument, the lack of practiced movement patterns, and the environmental and occupational stresses inherent in the role" (Daley et al., 2020), very few scholars have examined choral conductor injury. In a 1985 pilot study of 153 choral conductors, Simons found that choral conductors suffered from mental stress, general fatigue, and vocal strain. Twenty-seven percent of respondents also reported back and shoulder problems that affected their conducting.

Prevention and Treatment Strategies

To date, most osteopathic research for performing arts medicine has emphasized the diagnosis and treatment of the musculoskeletal system (Shoup, 2006). Shoup explained that "performing artists require near perfect function of the musculoskeletal system to meet the high demands of performance" (p. 854). Therefore, an osteopathic approach considers all causes of injury and provides a rational and multi-disciplined treatment plan to prevent or treat injury. This treatment plan may include approaches such as medication, physical therapy, surgery, lifestyle modifications, examination of practice habits, osteopathic manipulation, yoga, and deep muscle massage among other treatments (Shoup, 2006). Osteopathic treatment often combines several manipulative modalities in order to obtain the best results.

Although playing-related injuries pose a real threat to musicians, Bosi (2017) reported that musicians often ignore the symptoms, sometimes hindering their own recovery. Franklin (2016) noted a "surprising lack of an empirically verified method of teaching healthy movement of the body in music making, especially at a young age" (p. 2). As conductors

often do not learn conducting technique until they are adults (Daley et al.., 2020), this is counter to the culture of many disciplines where technical skills and knowledge of risk/injury prevention are developed simultaneously. Furthermore, employees with positions in manual labor (warehouses, construction, line production, etc.) typically receive training every three years to maintain a safe workplace environment (Training Requirements in OSHA Standards, 2015). No such broadly implemented education or employer-based training in choral conducting is known to these authors or has been reported by previous researchers. There have been a few different prevention models that have been introduced over the last decade to help conductors avoid vocal and physical injuries.

Diaz (2021) posited body mapping as a method to prevent injury and address quality of movement for instrumentalists, singers, and conductors. A somatic method designed for musicians, Body Mapping encourages individuals to explore their perception of their bodies through anatomical information, self-observation, and self-inquiry (Diaz, 2021). An incorrect map of a body, Diaz explained, can produce rigid or uncoordinated movements that may lead to injuries.

The *Alexander Technique* is another method to approach injury prevention and learn about the physiology of the body (Franklin, 2016). A psychophysical method, the Alexander Technique led to the most efficient use of the body while conducting through "directed thinking activities and heightened kinesthetic awareness (p. 4). Physiology and knowledge of how to utilize their bodies to communicate is of the utmost importance as choral conductors rely heavily on non-verbal methods of communication.

Taylor's (2016) practitioner guide to injury prevention and wellness for music educators, *Teaching Healthy Musicianship*, stressed the importance of ergonomics for musicians and music educators. Its five rules of ergonomics were to maintain good posture, avoid repeated twisting and reaching, avoid hunching, create a comfortable environment, and move continuously (Taylor, 2016). Music educators should consider their desk and computer ergonomics, the height of the conductor's stand and podium, the size and weight of their baton, and ergonomics within the music library, car, and home. One full chapter of the book was dedicated to conductor back and shoulder pain, as Taylor said, "pain disorders of the shoulder and back are a common problem for conductors" (p. 135). Taylor addressed conductor injury, causes, and preventative and reactive stretches to address the pain.

MacDonald (2004) encouraged choral conductors to care for their voices through awareness of spinal alignment, core muscle groups, coordinated breaths, and ease and flow of phonation. Care for the voice is not limited to the singing voice; rather, care for speaking habits is equally important for a choral conductor. MacDonald cited additional vocal abuse factors such as daily stress, environmental conditions, allergies, psychological factors, and diet and exercise.

When prevention of vocal injury is no longer possible, the modality of treatment needs to be discussed. For individuals already experiencing a vocal injury, vocal rest is an "effective therapeutic option" if a full recovery with or without therapy is expected (Haben,

2012, p. 166). However, Haben advised that vocal rest is a short-term solution that often prevents singers from addressing the underlying problem. The author called for more clear guidelines regarding voice rest regimens for singers. The decision to seek therapy or resort to vocal rest can sometimes be controversial because of the difficulty to determine the efficacy of voice therapy with its wide array of symptoms and treatment methods. However, Carding et al. (1999) found strong evidence supporting direct treatment for patients with non-organic dysphonia, which was caused by overuse or misuse and a frequent diagnosis for vocal music teachers.

In response to the specific healthcare needs of performing artists like choral conductors, the Performing Arts Medicine Association (PAMA) was founded in 1989 (Performing Arts Medicine Association, n.d.). Through this association, medical professionals, artist educators, and music administrators collaborate to work toward the goal of improving health care for performing artists. PAMA members treat performing artists, serve as medical consultants, showcase research, and serve as a resource for performers who need healthcare and support. The organization's website, artsmed.org, houses a variety of resources including webinars, online courses, articles, and information about their annual international symposium (PAMA, 2024).

Although several researchers have examined the liability of musician or teacher injury and practitioner articles have provided injury-response advice to music teachers, no studies have investigated patterns of injury and prevention by choral conductors. Therefore, in this study, our team of two music teacher educators, one osteopathic physician, and one osteopathic medical student sought to identify the most common choral conducting-related injuries and determine the ways conductors completing the survey have adapted their physical gesture to accommodate or avoid pain and discomfort. Research questions included (a) What injuries did choral conductors experience throughout their careers?; (b) How did conductors adapt their gesture to account for injury?; and (c) What preventative responses did conductors utilize as a result of their injury?

Method

Participant Recruitment

An Institutional Review Board approved the following research method and online survey. We created a researcher-designed online questionnaire (Appendix A) in an effort to reach a broad group of choral directors. We acquired our participants through online choral music educator forums, social media posts, and a research call via a national choral association's listserv. Calculation of actual response rates was not possible due to the unavailability of the numbers of participants in each virtual venue. We collected 94 survey responses and included 75 in this investigation. We excluded incomplete surveys. The undergraduate student demographic of respondents was also prevented from continuing the survey and was excluded from the results. Current and retired choral directors were permitted to continue.

Participants

Participants (N = 75) were volunteer practicing and retired choral music educators. Respondents were 50 women (67%), 24 men (32%) and one nonbinary individual (1%) with a mean teaching experience of 19.58 years (range = 1-40 years of teaching experience). For the majority of participants, the highest degree earned was a master's (n = 44, 59%), followed by bachelor's (n = 17, 23%), doctoral (n = 13, 17%), and no degree (n = 1, 1%). Participants resided in 24 of 50 U.S. states, with the majority of participants residing in Arkansas, Missouri, and Texas (n = 42, 56%). Approximately 89% of the participants identified as White with the next largest group being Black or African American at 6%.

Questionnaire

Utilizing the limited extant literature on choral conductor injury, as well as the expertise of both the choral music educators and the osteopathic physicians on the research team, we designed a survey to help us learn more about choral conductor injury. We used the online survey tool Qualtrics to create the questionnaire for the investigation (Appendix A). We piloted the questionnaire by sending versions and updates to music education and wellness researchers (n = 3) for suggestions and edits. The questionnaire included two sections. Section 1 contained a consent statement, demographic information, types of choirs taught/conducted, and rehearsal practices/structure. Section 2: included: an injury attitudes Likert scale; injury experiences, including questions from the Nordic Musculoskeletal Questionnaire (NMQ); (c) injury affects; (d) responses to injury; and (e) space to share additional information. Specifically, Section 2 included the following:

(a) injury attitudes Likert scale (e.g., Injury is part of being a vocal teacher; My injury is an integral part of my teaching experience; My pain/discomfort level from occupation-related injury affects my sense of well-being)

(b) injury experiences (e.g., Describe your most prominent choral-occupation-related injury)

(c) injury affects (e.g., What symptoms did you experience as a result of your injury?),

(d) responses to injury (e.g., How did your injury and symptoms affect your conducting? What adaptations did you make in response to your injury?)

(e) space to share additional information.

Responses to the online survey were in the form of Likert scales, check all that apply, diagram clicking, drag the cursors, and open-ended responses. The NMQ is a validated evaluative tool to determine areas of the body where injury has occurred. It was developed by

Kuorinka et al. (1987) for epidemiological use and not clinical diagnosis.

Data Analysis and Trustworthiness

We uploaded open-ended questionnaire data into the qualitative analysis software Dedoose and independently coded the data for emergent themes. We then cross-checked codes by comparing our independently derived results. Once coding was complete and coding differences were addressed and managed, we classified codes into themes, identified patterns, and drew conclusions in response to our research questions. To ensure the trustworthiness of the data, we utilized data triangulation, peer debriefing, and intercoder cross-checking (Creswell, 2014).

Quantitative analysis was completed by isolating data and correlated data points into an Excel spreadsheet and calculated using the software's formulae. An example of correlated data would be the types of injury according to the length of rehearsal periods.

Results

An important aspect of the study's results can be examined through quantitative and qualitative lenses. The prevalence of different injury types in addition to the numbers of working years provided insightful information. For conductors who had been teaching more than the mean number of years (n = 19.6 years), the total number of injuries per participant was significantly higher (most respondents below the mean did not report any injuries). In particular, the frequency of shoulder and voice-related injuries was very high among more veteran conductors. Reading participants' description of their injuries offers insight about the behaviors and risks involved in teaching in a choral music setting. Respondents frequently listed psychological and professional difficulties which grew out of their physical injuries.

What injuries did choral conductors experience throughout their career?

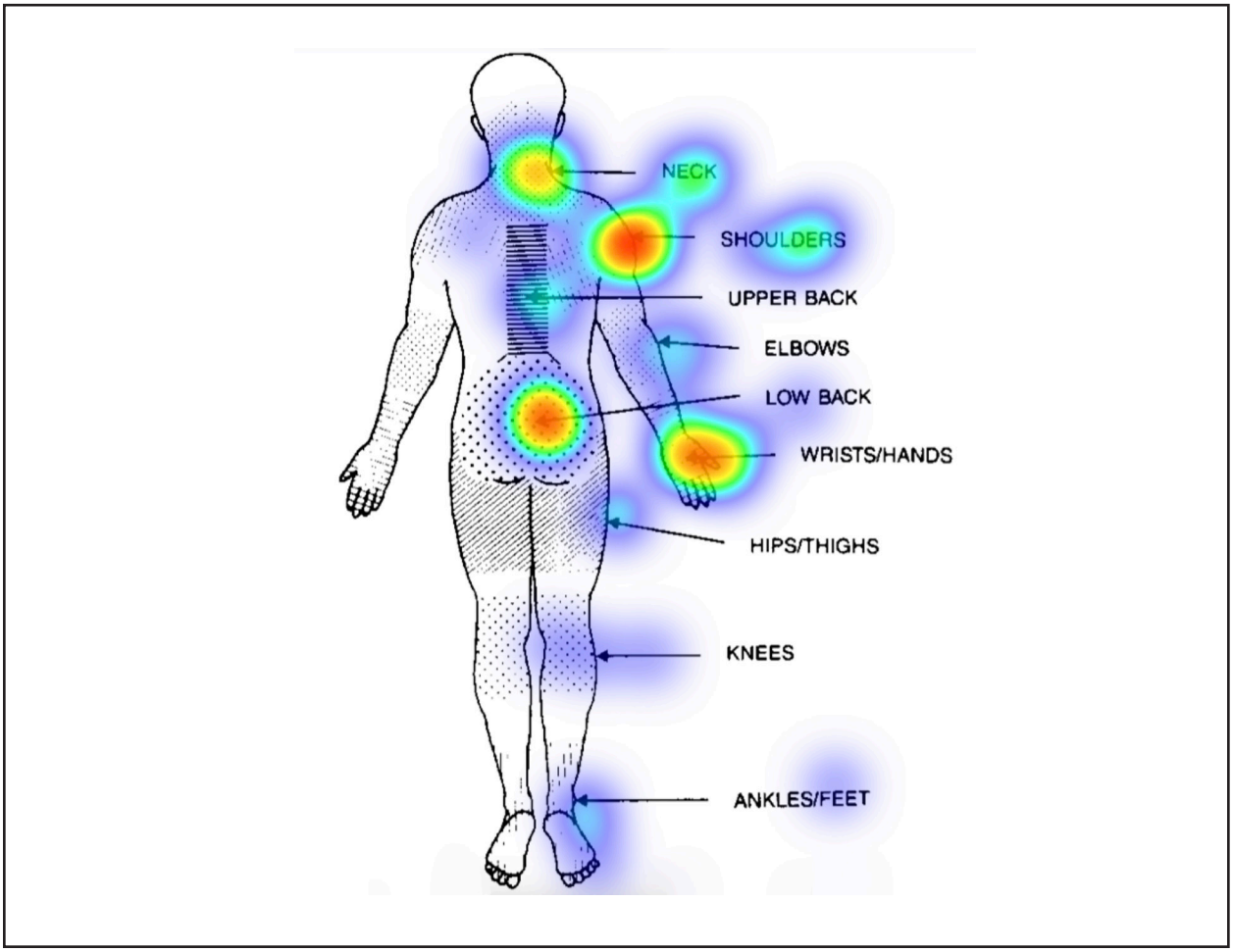
The mean of time taught for all participants was 19.6 years. Respondents with more experience teaching than the mean accounted for 87% of conductors with reported injuries, while respondents with less than the mean experience accounted for 13%. There was no strong trend between the type of injury sustained by a choir director and the setting where they worked (elementary, middle school, university, etc.). The mean duration of a typical rehearsal for all respondents was 69.0 minutes. However, the mean duration for participants with different types of injuries varied. See Table 1 on the next page for rehearsal durations based on injury type.

One method through which respondents indicated the location of their injury in this study was by using the Nordic Musculoskeletal Questionnaire (NMQ), a validated methodology in epidemiological studies. Figure 1 on the next page shows the aggregate responses

Table 1.
Rehearsal Durations Based on Injury Type

Injury Type	Average Rehearsal Length (minutes)	Standard Deviation (minutes)
Shoulder	80.23	27.11
Wrist/Hand	65.1	29.75
Neck	64.67	36.41
Low back	56	29.4
Lower extremity (hip, thighs, knees, ankles, feet)	72.5	30.4
All participants	66.29	23.08

Figure 1.
Participant Responses to Nordic Musculoskeletal Questionnaire (NMQ)



regarding the point of injury. A higher concentration of responses is indicated by warmer colors (red, orange, yellow) and a lower concentration of responses is indicated by cooler colors (green, blue, violet). It seems that some respondents clicked on the name of the body part (e.g. neck, shoulders, etc.) rather than the location on the body.

Over half of the participants who had a work-related injury said that it affected their conducting (n = 24) and we followed up with more in-depth questions for this group. The frequency of injuries as reported by those participants can be seen in Table 2.

Table 2.
Number of Primary Injuries by Area of the Body

Area of Body	# of Reported Injuries	% of Total
Shoulders	14	19%
Neck	10	13%
Hands/Wrists	8	11%
Lower Back	6	8%
Upper Back	5	7%
Hips/Thighs	3	4%
Elbow	3	4%
Voice	2	3%
Other	2	3%
Ankles/Feet	1	1%
Knees	1	1%
No Injury	20	27%
Total	**75**	

Repetitive stress injury (RSI) accounted for 66% (n = 14) of these injuries, 29% (n = 6) indicated an acute injury, and 1% (n = 1) of individuals reported neither repetitive stress nor acute injury. The average onset of injury symptoms occurred 17.3 years into their teaching career. 100% of respondents in this sub-group reported that they had two or more

work-related injuries that affected their conducting. When we prompted these participants to report all locations of injury, the results were "other" (*n* = 15), shoulder (*n* = 10), wrist/hand (*n* = 9), lower back (*n* = 8), neck (*n* = 5), ankles/feet (*n* = 3), upper back (*n* = 2), and knees (*n* = 2).

Types of Reported Injuries

The majority of injuries that participants reported were upper body injuries, including the arm, wrist, hands, back, elbow, and shoulder. Shoulder injuries were the most commonly reported injury in this survey, with many participants reporting sore, painful, or frozen shoulders; torn rotator cuffs, hitches in their shoulder movement, calcific tendonitis, bursitis, and shoulder impingement syndrome. Arm injuries that affected quite a few participants' conducting included "pain in my right arm if I extend it for long periods," neuropathy in both arms, and near loss of a right arm due to a bone infection. Participants (*n* = 2) reported elbow tendonitis or tennis elbow. Wrist and hand impediments to conducting included arthritis (*n* = 3), carpal tunnel (*n* = 2), cubital tunnel (*n* = 1), sprained wrist or fingers (*n* = 2), stiff fingers and wrists (*n* = 1), and cuts on fingers from snapping (*n* = 1). Some participants reported degenerated or injured lumbar discs as well as muscle spasms and pulled or strained back muscles.

Participants also reported lower-body injuries, vocal injuries, and a traumatic brain injury that affected their abilities to conduct. Lower-body injuries included a sprained ankle (*n* = 1), arthritis in the knee (*n* = 1), neuropathy in the legs (n = 1), a broken foot (*n* = 1), and pain in the feet (*n* = 1). Vocal complaints included "severe laryngitis," "vocal fatigue," "voice strain," "loss of singing/speaking voice," "vocal cord damage," "muscular tension dysphonia," "vocal injury," "hoarseness," "breathiness and vocal strain."

Injury Causes: Acute

Causes of acute injuries that impaired participants' choral conducting included car accidents, falls, moving or faulty classroom equipment, and student-inflicted injuries. Four participants experienced car accidents that affected their abilities in the choral classroom. One participant said, "I didn't have too many issues with conducting until I was in a car accident and had to have a rotator cuff surgery done. Now my shoulder tires out faster." Another participant reported, "I had a car accident and suffered from muscle spasms in my back. It has affected my career as a teacher and as a conductor." A third participant explained that due to a car accident and subsequent surgery, they can no longer play the piano.

Several participants reported falls that led to injuries that affected their conducting. One participant fell from a portable stage that was not secure, injuring their leg. Another participant fell when they were standing and conducting on a chair, injuring their wrist. During a musical theater rehearsal, one participant fell and tore their rotator cuff, affecting their conducting for ten weeks.

Classroom equipment was the cause of several reported injuries. Several participants re-

ported acute injuries including hand and back injuries due to moving pianos, choral risers, chairs, and/or heavy furniture. Another participant was "cut to the bone moving glass shelf in the music library."

One participant reported a student-inflicted injury. A student "running full speed" ran into this teacher and "slamm[ed] into [their] head." This caused a traumatic brain injury.

Injury Causes: Repetitive Stress Injury

Repetitive stress injuries (RSI) accounted for the majority of participant injuries. Participants indicated classroom and piano ergonomics, misuse and overuse, poor technique, and tension as the main causes of these repetitive stress injuries.

Classroom ergonomics played into participant RSIs in a variety of ways. Piano-related RSIs included "hip, wrist, and thumb pain" from teaching while standing behind a piano, a "sprained finger from repeated playing notes for pop music," "arthritis in my hand joints from years of playing piano," knee and foot pain "from standing and playing the piano," bursitis from "sitting too long on a piano bench," "tightness and stiffness in my fingers and wrists," and carpal tunnel from playing piano for choral groups. Other RSIs incited by classroom ergonomics include "lengthy holding of scores" and a foot injury due to "standing for so many years on a concrete floor to direct."

An overwhelming majority of participants used the words "misuse" or "overuse" to describe the causes of their repetitive stress injuries. Some participants reported overuse in regards to their conducting (e.g., "my injuries come from overuse in the shoulder area" or "overuse of arms during the [COVID-19] shutdown while conducting. My gestures were bigger and more forceful to make up for the lack of facial expression due to [my] mask."). Other participants reported overuse in regards to their vocal use (e.g., "misuse of voice," "hoarseness on rare occasions from overuse," or "Breathiness and vocal strain from overuse").

Length of conducting experiences played into this overuse for several participants who reported injuries caused by "lengthy holding of scores and conducting positions," "years of rehearsing constantly with almost no downtime," "rehearsals too long when multiple rehearsals in succession," and "conducting a concert after extensive rehearsal." Several participants blamed poor technique for their overuse or improper use. In free responses, participants mentioned poor conducting technique, piano technique, standing or sitting technique, and overall tension as contributors to their repetitive stress injuries.

Previous Injuries

Injuries acquired prior to employment as choral conductors affected the ways several participants approached their teaching or conducting gesture. They reported acquiring the injuries anywhere from childhood to during their undergraduate and graduate work. Previous injuries were acquired from accidents and by participating in sports like basketball, running, water skiing, and mountain biking. One participant's disc injury from college persists,

forcing them to "hunch or get weight off of one foot to help ease the pain if I have been standing for a long time." They explained, "I have seen this in my videos of conducting which keeps me off my center of balance and does not allow me to be tall and centered."

For some participants, their injury was not a temporary impediment, but rather a long-term disability to which they have had to adjust. One participant reported losing their arm. As a result, they conducted using their left arm only and "because of this, my left arm gets tired easily having to conduct and do everything else (daily life routines)." Another participant was diagnosed with rheumatoid arthritis, which made "work-related conducting more difficult as well as healing." Another participant reported having a cochlear implant for the last 6 months, for which they were "thankful…so that I can continue my career."

How did conductors adapt their gesture to account for injury?

In order to account for their injury or injuries, participants reported gesture modifications including altering alignment, change of technique, rest, and avoidance. The need for such strategies suggests that a full recovery was not achieved. Of participants who indicated they had encountered an injury related to their profession (n = 41), 46.3% of respondents reported their ongoing injury, pain, or significant modifications to basic teaching behaviors such as conducting, standing, or singing. Several conductors reported a need to change arm positions frequently or to utilize their non-dominant conducting arm more frequently. One participant mentioned the need to "shift weight from one foot to the other to ease pain," and two participants reported a need to sit and conduct from the piano exclusively.

Many participants reported changing their conducting size or position. Many participants focused on using a smaller gesture to accommodate their injury (e.g., "Adjusted conducting pattern to much smaller movements," "smaller gestures," "minimizing my overall gesture). One participant worked to "broaden conducting positions" in response to their injury and another employed the baton in order to minimize gesture.

Several participants used rest as an important way to address their injuries. This rest may occur during conducting (e.g., "sometimes rest one arm while continuing to conduct with the other" and "stool used for sitting if needed"). The rest may also occur between conducting periods (e.g., "vocal rest" and "being mindful of when I need to rest!")

The overwhelming amount of written feedback regarding gesture modification indicated a total avoidance of the use of the injured mechanism. Some participants reported being completely unable to conduct (e.g., "often unable to conduct," "I had to keep it in a sling so I didn't use it, until I recovered," "I don't conduct with my arms," "I simply could not use the arm"). Other participants reported major alterations in their vocal use (e.g., "vocal rest for two years," "never sing for pleasure," "can't demonstrate"). Other avoidance behaviors reported by participants included relying on others to move furniture and no longer playing the piano.

What preventative responses did conductors utilize as a result of their injury?

As a result of their injuries, participants reported utilizing preventative responses against further injury, including classroom modifications and therapy and/or treatment. Some participants reported planning to continue the injury-causing behaviors as they felt as if there were no alternative options.

Classroom modifications included altering the environment, including seat choice, sound and light mitigation, and employing tools or devices like a microphone, crutches, a cochlear implant, and increased use of the piano and baton. Some participants reported limiting how many hours per day they engaged in risky classroom activities and implementing "rest periods" into their classroom routines. Students played a role in some participants' prevention responses, leading vocally to give their teacher's voice a break and helping to move furniture to prevent further injuries.

Of the respondents who said they engaged in treatment for their injury (n = 21), 66% received three or more types of treatment, with the two most common types being physical therapy/occupational therapy (67%) and stretching (62%). Therapies employed by participants in response to their injuries included massage, guided strength training, and voice therapy. One participant mentioned how they "learned how to talk with speech therapy and how to protect my voice," while another has had "several years of voice therapy" and must utilize a classroom microphone and rest their voice completely when not at school. A few participants reported responding to their injury with surgery or medication.

Three participants reported plans to not respond to their injury due to time or job constraints. One participant shared, "It is heartbreaking. I can never sing for pleasure. I have to continue to damage my voice because of my job. I am too old and too close to retirement to change fields. I feel like I am in a horrible Catch 22." Another participant reported that without surgery, they would just have to accept their "limited range of motion and discomfort." A final participant who suffered a rotator cuff injury acquired by conducting reported that their injury did not affect their rehearsal, so they did not need to respond to their injury in any way. They said, "That is confusing to me, but it is my experience."

Additional Considerations/Concerns

Throughout the free-response portions of the survey, participants raised a variety of concerns regarding their choral-conducting related injuries, including injury as a part of the job, injury as a part of aging, stress and anxiety as a part of injury, and job security concerns as a result of injury. One participant shared their surprise at teacher acceptance of vocal injury as part of the job: "I have been in meetings recently where multiple teachers have spoken about vocal injury as a guarantee of teaching. Teachers agreed that when we begin teaching, we agree to sacrifice our own singing voices. I was surprised by this." This statement is supported by Byeon (2019). Several participants mentioned age or aging as a factor when considering injury (e.g., "Many of the other injuries are just with age").

Of participants who indicated they had encountered an injury related to their profession (n = 41), 9.7% indicated a resulting pattern of anxiety and depression. One mention was in response to a physical injury ("intense stress and anxiety that caused me to go on disability"), and another in response to emotional abuse from administrators ("the unseen nature of psychological injuries caused by abuse of administrators who do not understand music or methods of teaching in a choral setting has caused my depression to spiral out of control").

Job security was a concern for several participants following their injuries. One high school choral director who could no longer play the piano following a car crash explained, "Since I was not at the end of the time required to retire with full benefits, I was grateful when an elementary principal accepted me as a music teacher." Another choral director was instructed by administration to teach less in order to save their voice following a vocal injury: "They were asking me to not do my job fully. They denied workman's comp…" Of respondents who experienced an injury resulting from their work (n = 41), 22% said they had reported it to an administrator and only 12% had received support from their employer in the form of workers' compensation, flex-time for care, etc. Of this group, 34% had taught grades 6-8 and 34% had taught grades 9-12 at some point in their career. Other grade levels were less represented.

Participants reported their feelings on a range of issues related to their work and injury. Multiple choice options (and the response value) were: *Strongly Agree* (2), *Somewhat Agree* (1), *Neither Agree nor Disagree* (0), *Somewhat Disagree* (-1), and *Strongly Disagree* (-2). The questions respective mean response values were as follows: "My personal identity is tied to my work as a teacher" M = 1.10; "Non-work-related injuries have affected my life as a teacher" M = 0.68; "Injury is just part of being a vocal music teacher" M = -0.71; "I was aware of risk for occupation-related injury when I became a teacher" M = -0.51; and "I am equipped with wellness strategies to prevent injury in my job" M = 0.21. These responses revealed important issues about teacher identity and the culture of work-related injury.

Discussion

Results in a Research Context

The connection of workplace culture for professional musicians and PRHPs has been well-established by existing research (Jacukowicz, 2015). Many of those factors, such as long hours, repetitive practice, and psychological stress, could account for the fact that a majority of participants' reported injuries were repetitive stress injuries (RSIs). This study found that 66% of the primary injuries subjects chose to discuss were RSIs and were not acute. This preponderance was consistent with the 50-88% frequency of RSIs found by Yang et al. (2021). Had we asked subjects to report the cause of all conducting-related injuries, and not limited them to discussing a primary injury in the current study, the data may well have been closer to the 93% found by Bosi (2017).

The results of utilizing the NMQ image in this study to determine areas of injury were similar to results from the Zaza and Farewell study (1997) regarding playing-related musculoskeletal disorders (PRMD) of instrumental musicians in which a modified NMQ was used. Researchers within that study asked a question regarding points of injury similar to Question 14a of the current study in which a human diagram was labeled by body region. Common points of high-frequency injury between the two studies were the neck, shoulders, lower back, and wrist/hands. One discrepancy in Zaza and Farewell's data compared to the current study was a higher prevalence of upper back pain. The similar injury findings between the two studies suggest significant merit for advocacy in Performing Arts Medicine. Furthermore, this parallel could give focus to wellness educators as well as researchers and healthcare providers who specialize in the treatment of musicians. These topics will be discussed in greater detail in subsequent sections.

Several respondents in our study reported feeling distressed over limitations in their conducting abilities. One vocal music teacher reported, "Broke a foot in my classroom, intense stress and anxiety that caused me to go on disability." These frustrations of teachers were likely intensified by the frequency with which professional musicians have been found to connect their work to their personal identity (Guptill, 2011). When asked about pre-service teachers' expectations and active teachers' observations regarding work-related injury, the respondents indicated a significant disparity regarding what was anticipated and what occured. Encouragingly, respondents largely rejected the supposition that injury is inherent in vocal music teaching. Having limitation of activity is not merely a problem of pain and workplace challenges, it may well prompt conductors to redefine their self-perception, relationship to others, and feelings of worth. The potential psychosocial ramifications are considerable and are not fully explored in this study but are deserving of further research.

Within our study, we asked injured conductors what types of medical care they sought for healing. Their answers included surgeons, primary care physicians prescribing medication, chiropractors, acupuncturists, physical and/or occupational therapists, osteopathic physicians, and counseling. Although some of our respondents received at least some benefit from these modalities, not all received full restoration of health and motion.

Osteopathic physicians may also provide a beneficial outlet to provide this restoration. The osteopathic approach takes into account all possible causes of injury, the mechanism by which it occurs, and through their thorough knowledge of the musculoskeletal system, can provide a multi-disciplined approach to treatment (Shoup, 2006). In addition to their ability to prescribe medication, order imaging and physical or occupational therapy, Osteopathic physicians have also been uniquely trained to diagnose regions of dysfunction throughout the body and provide manipulative treatment in the office setting. This often results in fewer medications prescribed and, over time, resolution of patient's pain and dysfunction. Additionally, because osteopathic physicians recognize that mental and emotional well-being plays into physical well-being, they provide treatment that also recognizes and incorporates the self-identifying aspect that many choral conductors communicated in this

study (Ward et al.., 2003). Although there is literature to support the use of Osteopathic manipulation for instrumentalists, research surrounding the uniqueness of choral directors is lacking, and future research should focus on further understanding the types of injuries that occur with this group and the efficacy of osteopathic manipulation for this group of individuals.

State of the Choral Workplace

The most common employers for American choral directors have been school systems, places of worship, and non-profit arts organizations. The authors of this study examined the collective challenges of working in these three settings as they related to employer health and wellness. Choral conductors in this study indicated a fairly strong connection between their work and identity. This finding correlates to previous research about instrumental musicians (Guptill, 2011). When workers felt strongly connected to their vocation, the effects often included career longevity, effectiveness, and positive self-esteem.

First, we will examine the largest group of employees: those who work in school systems. Researchers have found that individuals who remain in the education profession for five years were likely to remain until retirement (Ingersoll et al., 2021). Participants in this study strongly indicated that their identity being was tied to their work as teachers. Coupled with the emotional valences of being an arts educator, it is easy to understand how individuals became willing to endure inconveniences, under-compensation, and even injury (Scheib, 2006) for a career about which they are passionate. With the ever-increasing portfolio of responsibilities for today's teachers in America (NASM, 2023), preservice education has become vast and weighted with requirements such that wellness for the teacher themself has lagged behind. This area of wellness education has been both under-researched by academics and under-prioritized by administrators, as illustrated by two accounts reported in the present study of school principals who gave less than their utmost concern for the well-being of their employee. This study endeavored to examine the prevalence of work-related injury for choral directors, attitudes about themselves and their injury, and efforts to mitigate those injuries.

Choral directors working in places of worship are very often in a part-time capacity and are, therefore, not subject to the benefits of health insurance. Some religious organizations, as a result of their affiliation or budget restrictions, do not have the financial resources to compensate or replace employees who are on temporary leave. Further, the clergy who often manage the day-to-day operations of a congregation frequently do not have training in human resources skills to identify workplace injuries or reporting to employer insurance, if any exists. When merged with the personal commitment to the mission of the organization, these factors create the conditions for an atmosphere where conducting-related work injuries may be under-reported or addressed.

Conductors working in non-profit arts organizations such as community choirs, youth choirs, or community music schools may encounter similar challenges to places of worship

when it comes to securing worker's compensation. Depending on the long-term fiscal and policy approach of its board and staff, minimal procedures may be in place.

Education and Advocacy

Wellness education in pre-service teacher training programs have had far-reaching benefits for physical and mental health, self-efficacy, and self-esteem (Stapp et al., 2019). Once in the classroom, the gains from previously experienced wellness curricula extend beyond the teacher to the students. Unfortunately, a meaningful wellness education in preservice music teacher programs is still the overwhelming exception within university curricula. The National Association of Schools of Music, the accrediting body for music programs in U.S. higher education, has only recently included recommendations that wellness be addressed in the curriculum but has not stipulated how formally, in what coursework, or what topics should be addressed. Since most current university faculty do not have such training in wellness study, adequately educating pre-service music teachers is a cyclic problem.

When asked if they felt equipped with wellness strategies to prevent injury, participants suggested significant room for wellness training in pre-service and continuing education formats. When paired with other responses regarding the awareness of risk, this survey results suggested both the desire and need for additional research and instruction regarding injury prevention and management. Daley et al. (2020, p. 23) called for (a) "empirical research investigating the incidence and type of injuries sustained by conductors at all levels," (b) "prioritizing pedagogical materials and course designs that address injury prevention and body awareness early and often," and (c) "advocating for injury prevention as foundational to the body of skills needed for successful conducting among service organizations and accrediting bodies." The likelihood of a choral director now in the middle or late part of their career having had wellness education in their degree program is very low. Therefore, it is incumbent upon professional organizations and providers of continuing education to provide information and training in the current field.

Advocacy for better working conditions and support is a multi-pronged solution. The same institutions needed to provide education and training for current choir conductors must also work to equip employers, administrators, and even insurance companies with the knowledge and response capacity to better serve their constituents. As the low rate of injury reporting found in this study suggested, many school leaders and policymakers may have been unaware or under-informed about the risk profile to choral directors and the long-term impacts on their health. Therefore, it is incumbent upon conductors to speak up about their concerns and accurately report both acute and repetitive stress injuries.

Limitations

Limitations of this study include a limited sample size and relative lack of diversity. We are confident that the majority of participants encountered the study invitation through forums for choir directors on social media. Though study participants came from 24 U.S.

states and territories, 56% of participants came from Arkansas, Missouri, or Texas. This concentration of responses is likely due to two factors. First, our ability to gain access to private social media groups, which are often regionally-based, was more challenging than anticipated. Second, we have more professional relationships in these states and greater access to online forums. Those relationships likely contributed to a higher response rate.

Participants in this study indicated a high degree of professional mobility with 87% having conducted two or more levels of choir (Pre-K, K-5, 6-8, etc.). The survey failed to ask participants what age range they were teaching when the discussed injuries occurred. Therefore, an indirect correlation among general experience and types of injuries is all that can be determined.

Further Research

Our findings highlighted the need for both a greater depth of knowledge on the subject and for new questions to be asked in future studies. A larger and more diverse sample of subjects would serve a wider swath of choral directors in the U.S., particularly across racial and geographic demographics. The lack of diversity in this study's respondents generally reflects a lack of diversity in the profession itself. Unfortunately, no choral music professional organization effectively tracks the demographic makeup of its membership, so it is difficult to say to what degree this study's participants reflect the field of choral directors. Below are recommended questions for future research, and the limitations of those topics in the current study.

Future researchers might consider the role of the work setting (elementary, middle level, high school, adult/community, etc.) and the injury. We only asked in what settings had participants worked over the course of their career. Understanding the frequency and nature of injuries that are correlated to their educational setting may help to narrow recommendations for injury prevention.

We also did not explore the types of specific wellness education that conductors received in their pre-service training and/or continuing education. Respondents indicated here only the degree to which they felt prepared to manage their injury. A more detailed understanding of wellness content knowledge preservice would aid in finding common gaps of education.

Additionally, future researchers might consider how choral directors alter their movement and function related to the practice of conducting, playing piano, voice use, and other movements in response to their injury. Some conductors volunteered that information in this study, but we did not ask directly or ask for further details.

Finally, future research regarding conductor injury and prevention should explicitly include voice-related injury to allow participants to identify their specific injuries with more clarity. The current study did not enumerate the voice as an option to be included in its reporting, therefore it is most likely under-represented in the data.

Conclusion

The vast majority of respondents in this study reported at least one injury which affected their work as a choral director. Often, their injuries were sustained from job-related behaviors or events. The types of injuries were wide-ranging, affecting the musculoskeletal and nervous systems throughout the body, voice-related injuries, as well as negative impacts on participants' mental health. If these trends are indicative of the broad population of vocal music teachers, then there is a need to address them. Based on the data found in this study, we believe that the ongoing risks to choral conductors' physical and mental well-being is significant enough to warrant (a) increased wellness education in pre-service and continuing education, (b) increased awareness of risks for preservice conductors, (c) deeper research to better understand causal trends of injury in larger and more diverse populations, and (d) increased education for medical providers about the idiomatic risks and treatment options for choral directors.

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Appendix A

Survey

Demographics

In which state do you currently reside?

What is the highest level of school you have completed or the highest degree you have received?

Are you Spanish, Hispanic, or Latino or none of these?

Choose one or more races that you consider yourself to be:

What is your gender identity?

Which of the following best describes your sexual orientation?

Are you now married, widowed, divorced, separated or never married?

Occupation

For how many total years have you been teaching?

How would you classify yourself? (Graduate student, early career professional [0-9 years], mid career professional [10-19 years], late career professional [20+ years], retired professional)

Which grade levels have you taught?

Do you currently teach in a private or public setting?

How many hours per week do you work with each of the following: (choral ensemble, instrumental ensemble, elementary general music, secondary general music, higher education courses)

On average, how long are your rehearsals? (in minutes)

Do your rehearsals usually include a break when you are not using your body to conduct or teach?

Please indicate your level of agreement for the following statements.

- My personal identity is tied to my work as a teacher.
- Non-work-related injuries have affected my life as a teacher.
- Injury is just part of being a vocal music teacher.
- I was aware of risk for occupation-related injury when I became a teacher.
- I am equipped with wellness strategies to prevent injury in my job.
- I have encountered injury as a result of my work as a teacher.
- If yes, indicate your level of agreement for the following statements:
    - My pain/discomfort level from occupation-related injury affects my sense of well-being.
    - My injury is an integral part of my teaching experience.
- Which is your dominant conducting hand?

Injury

I have experienced one or more choral-occupation-related injuries that affect how I conduct my ensembles.

If yes:

- Click on the image where any choral-occupation-related injury has occurred (up to 5 clicks)
- Please describe your most prominent choral-occupation-related injury (choose one):
- Please describe how your chosen choral-occupation-related injury occurred:
- In what year of teaching did the injury occur?

- Was your injury an acute injury or repetitive stress injury?
- Which part of your body was affected by your injury? (Choose all that apply)
- Please indicate which side is affected by your injury
- What symptoms did you experience as a result of your injury? (Choose all that apply)
- How would you describe your current injury status?
- How did your injury and symptoms affect your conducting? What adaptations did you make in response to your injury?
- What steps do/did you take to treat your injury? (Choose all that apply)
- Did you report the injury to your administrators?
- Did you receive support from your job? (i.e., workers' comp, flex time for on-going care, etc.)
- Have you experienced any other choral-occupation-related injuries?
- If yes: Please briefly describe any other choral-occupation-related injuries:
- Is there anything about your injuries or choral-related injuries you would like to share with us?

End of Survey

Article

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Scoping the Literature of Transgender Singing: Experiences and Pedagogical Insights in Choral Contexts

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Abstract

Choral conductors have expressed interest in working with transgender singers more effectively, however, opportunities for professional development and resources in this area have been limited. This article reports a scoping review designed to explore the experiences of transgender singers in choral settings. Results offer insights for choral conductors seeking to enhance their support for this group. In this study we reviewed literature from 2013 to 2022.

Of the 221 relevant studies included in the scoping review, 15 studies discussed choral contexts. These studies stressed the importance of (a) creating gender-inclusive and culturally responsive choral environments, (b) addressing concerns such as gendered language, concert attire, and voice part labeling, and (c) the impact of gender dysphoria on choral singing experiences. The search returned limited research on non-binary singers. Few studies disclosed the involvement of transgender researchers.

Environmental factors such as gendered norms in choirs and the role of choral conductors functioned as both barriers and facilitators for transgender singers in choral contexts. Choral conductors can play a pivotal role in creating trans-inclusive environments by using gender-neutral language and fostering allyship for transgender individuals. The studies reviewed also addressed the vocal effects of gender-affirming hormone therapy, vocal exercises, binding practices, and vocal health while emphasizing the psychological and emotional aspects of voice and gender identity.

While progress has been made in recognizing and accommodating transgender singers in choral settings, further research is needed to address the pedagogical implications of trans-specific vocal considerations, including gender-affirming hormone therapy and surgical interventions.

Keywords: transgender, gender inclusive, non-binary, choral singing, singing pedagogy

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Introduction

Recently, there has been a notable increase in the number of young individuals living their authentic lives as transgender, non-binary and gender diverse individuals (Herman et al., 2022). This can has also been seen in choral contexts, where an increasing number of choral conductors have found themselves working with transgender individuals (Cates, 2022). Sataloff argued that choral conducting practices should prioritize the development of choral singers' voices without causing fatigue or harm (2008, p. 27). It is therefore imperative that choral conductors have a comprehensive understanding of the pedagogical and physiological factors that affect transgender singers. Furthermore, to appropriately care for the singer, conductors must understand the social and political factors that may impact the psychology of transgender singers, and subsequently, their vocal experiences. This paper, which presents part of a scoping review, aims to examine the extant literature that explores the experiences of transgender singers in choral contexts as well as pedagogical considerations for choral conductors.

Researcher Positions

The research team comprised (a) Naomi, a cisgender woman who conducts choirs, teaches singing and guitar, and undertakes research in choral and singing contexts; (b) Nadine, a cisgender woman who teaches singing and has extensive experience in working with members of the transgender community; and (c) Scott, a cisgender man who works as an academic researching gender and vocal pedagogy.

Terminology

We employed the term *transgender* as an umbrella concept encompassing individuals who are transgender, gender diverse, sistergirls/sistagirls, brotherboys, two-spirit, non-binary, agender, genderqueer and genderfluid, or any other culturally specific gender labels that deviate from the commonly understood definition of cisgender (identifying with the gender assigned at birth).

Voice-related gender dysphoria refers to the distress or discomfort an individual may experience due to an incongruence between their vocal characteristics and their gender identity (Şirin et al., 2020, p. 54).

We adhere to the acronym LGBTQIA+ to encompass individuals identifying as lesbian, gay, bisexual, transgender, queer/questioning, intersex, and agender. We employed this acronym except in cases where a specific label is applied by the paper under consideration.

AMAB and AFAB denote assigned male at birth and assigned female at birth, respectively. These terms are used exclusively when the anatomical implications of assigned sex at birth are pertinent to the argument being presented.

Objective

Choral conductors have expressed interest in learning to work with transgender singers more effectively, however, opportunities for professional development and resources in this area have been limited. The objective of this article was to review the current literature across relevant disciplines to determine what the literature tells us about choral pedagogy for transgender singers.

Ragan's systems of voice production detailed five areas of vocal physiology relevant to singing: (a) respiration, (b) phonation, (c) registration, (d) articulation, and (e) resonance (2020, p. xiii). We have used these systems as a lens in our review to identify which systems of voice production were addressed within the literature in relation to transgender singing, and to highlight areas where further investigation is required.

Similarly, we also applied the lens of Thurman and Welch's (2000) concept of *body-mind and voice* to examine the holistic experience of choral singers whose bodies, minds, and voices are enmeshed in the neuropsychobiological act of singing. Voice-related gender dysphoria can negatively impact one's quality of life (Nuyen et al., 2023) and should be considered in a holistic view of the singing voice.

Method

We conducted a scoping review according to the PRISMA Extension for Scoping Review (PRISMA-ScR) guidelines (Tricco et al., 2018). This article reports on the small subset of the findings from that review relevant to choral contexts. The remaining results of the full review relating to vocal pedagogy in wider contexts will be published subsequently. We searched the following databases between the years of 2013 to 2022 (inclusive): (a) MEDLINE (via EBSCOhost); (b) Music Index (via EBSCOhost); (c) Scopus; (d) JSTOR; (e) Web of Science; (f) ProQuest Music Periodicals; (g) CINAHL (via EBSCOhost); and (h) ProQuest Dissertations and Theses. Our search strategy combined the concepts of transgender individuals and singing/voice to yield relevant results across all databases: (transgender OR transsexual OR transmasc* OR transfem* OR "gender diverse" OR "non-binary" OR "female-to-male" OR "male-to-female") AND (voice* OR sing OR singer OR singing OR vocal).

Developing a search strategy proved challenging due to the variability and diversity of terminology used to describe the transgender population in different countries and disciplines. Consequently, it was necessary to include terms such as "transsexual", despite this being considered outdated by many, as this term is still used in some research.

The eligibility criteria for the scoping review included:

- Study characteristics: (a) publication dates 2013-2022; (b) peer-reviewed journal articles, dissertations, and theses; (c) any study type and design; and (d) published in the English language

- Population: people under the transgender umbrella, plus voice professionals working with transgender people

- Intervention: (a) speech therapy/pathology for voice; (b) voice training; (c) teaching transgender singers; (d) singing lessons; (e) voice exercises; (f) participation in a singing program; (g) delivery of in-vivo voice-related gender-affirming surgical procedures; (h) vocal aftercare of voice-related gender-affirming surgical procedures; (i) gender-affirming hormone therapies impacting the voice; (j) autoethnography; (k) literature reviews; (l) self-perception of vocal parameters; (m) perception of gender in voice; and (n) analysis of vocal parameters

- Context: (a) singing voice; (b) Ragan's systems of the voice; (c) private voice studio; (d) group voice class; (e) singing environments; (f) music education contexts (where singing may take place); (g) voice performance contexts; (h) professional singing contexts; (i) university singing training environments; (j) avocational singing contexts; (k) school singing contexts; and (l) bodymind and voice contexts (self-perception of voice; gender-related vocal dysphoria; environmental factors; and awareness and evaluation of services)

- Outcomes: (a) experiences of voice users; (b) quantifiable voice qualities; (c) self-perception (patient-reported outcome measures) of voice; (d) perception of gender in voice; (e) wellbeing outcomes; (f) acoustic, aerodynamic, and laryngeal endoscopic imaging analysis; (g) auditory perceptual parameters; and (h) singing/choir/music teacher reports

Studies were excluded if they addressed (a) voice in the metaphorical sense rather than the physical voice; (b) gender-affirming hormone therapies that do not impact the voice; (c) non-vocal aftercare of gender-affirming surgery; (d) chondrolaryngoplasty or other esthetic surgeries where vocal function is not the intended outcome; or (e) speech therapy for components other than voice.

The search returned 221 relevant results. Of those, the 15 studies relating to choral contexts were the ones we reported in this article. Specific study characteristics were extracted from each study in the scoping review, and we have provided further details relevant to choral conductors from those studies here.

Results

Study Characteristics

The 15 papers that met our eligibility criteria and were categorised as relating to choral contexts are summarized in Table 1 on the next two pages. This table details (a) general information (publication date, name of publication, and country in which the study was conducted), (b) study characteristics (participant population and total number of participants), (c) methods (study design, evidence sources, and vocal parameters), (d) context (in relation to Ragan's systems of voice production (2020) and Thurman and Welch's (2000) bodymind and voice context), and (e) disclosure of a transgender researcher.

While a detailed critical appraisal of the methods employed in these studies was beyond the scope of this paper, it is worth noting that the method used most frequently was text and opinion (n = 9), followed by quantitative cross-sectional designs (n = 2), qualitative research methods (n = 2), ethnography (n = 1) and narrative study (n = 1). The studies were conducted within the United States (n = 9), Canada (n = 3), or both (n = 2), with one study failing to specify a location.

Transgender Researcher Disclosure

Among the fifteen studies analyzed, the involvement of a transgender researcher was only disclosed in two. While this is not a conclusive figure of how many of the studies had transgender researcher/s as part of their team (as it is possible that some transgender researchers did not choose to state this), we think it is interesting to note. Efforts to conduct ethical and valid research are increasingly acknowledging the importance of including members of the transgender community in research about them.

Community-based participatory research (CBPR) is an approach that emphasises the importance of including community members in all aspects of the research process, particularly when investigating historically marginalized communities such as transgender individuals (Katz-Wise et al., 2019). The principles of CBPR promote the development of culturally appropriate methodologies and a deeper understanding of the transgender community, ultimately yielding higher-quality data outputs (Holkup et al., 2004). The principles of this approach are particularly pertinent to the transgender community to ensure their experiences are interpreted appropriately, the diversity of their experiences is respected, and that the transgender community is empowered to "contribute to the generation of knowledge about their lives" (Katz-Wise et al., 2019, p. 189). While we do not know how many studies included transgender researchers and/or community participation, the fact that many did not mention these is a limitation of the research we examined in general. There are any number of compelling reasons why a researcher may not have disclosed their transgender identity. Such motivations may include apprehensions related to the potential consequences of this disclosure, such as heightened susceptibility to discriminatory hiring practices, exposure to hostile work environments, and the experience of microag-

Table 1

Summary of Papers Meeting Inclusion Criteria in Choral Contexts

Citation	Publication	Country	Participant population	No. of Participants	Study Design	Evidence Sources	Vocal Parameters	Bodymind and Voice context	Ragan's Systems of Voice Production	Trans Researcher Disclosed
(Anzaldúa et al., 2022)	Choral Journal	United States	Choir director/s; singer/s	6	Text and opinion	Expert opinion	Nil	Environmental factors	Nil	Yes
(Cates, 2022)	International Journal of Research in Choral Singing	United States	Trans; cisgender; choir director/s	227	Cross-sectional study	Survey	Nil	Environmental factors; awareness of and evaluation of services	Nil	No
(Clayton, 2020)	The Canadian Music Educator	Canada	Transmasculine; transfeminine; gender diverse; non-binary; singer/s; cisgender; 2SLG BTQ+ participants	98	Qualitative research	Other survey	Nil	Environmental factors	Nil	No
(Drake, 2018)	Dissertation/ Thesis	United States	Transmasculine; transfeminine; singer/s	2 solo musicians and 2 choirs plus data from audience members	Ethnography	Vocal parameters; interview; observation; performances; onsite fieldwork; recordings; videos; social networks	Fundamental frequency; pitch range	Self-perception of voice; gender-related vocal dysphoria; environmental factors	Phonation; registration; articulation	No
(Finch, 2019)	The Canadian Music Educator	Canada	Music teacher/s; singer/s; cisgender	1	Text and opinion	Observation; literature; professional experience	Fundamental frequency	Environmental factors; wellbeing	Phonation	No
(Freer, 2019)	Choral Journal	United States	Choir director/s; cisgender	1	Text and opinion	Observation	Nil	Nil	Phonation	No
(Gurss, 2018)	Dissertation/ Thesis	United States; Canada	Transmasculine; transfeminine; singing teacher/s; choir director/s; singer/s; cisgender; composer/s	154	Qualitaive research	Vocal parameters; interview; survey; YouTube and Facebook resources	Nil	Gender-related vocal dysphoria; environmental factors; wellbeing	Respiration; phonation; registration; resonance	No

continued from the previous page

(Hirner, 2022)	Choral Journal	United States	Transmasculine; transfeminine; non-binary; choir director/s; singer/s; gender expansive	N/A	Text and opinion	Observation; industry experience	Nil	Gender-related vocal dysphoria; environmental factors; wellbeing	Resonance	Yes
(Miller, 2016)	Choral Journal	United States	Choir director/s	1	Text and opinion	Expert opinion; professional experience	Fundamental frequency; pitch range; Fach/voice part	Nil	Phonation	No
(Palkki, 2015)	Choral Journal	United States	Choir director/s	N/A	Text and opinion	Expert opinion; literature	Nil	Nil	Nil	No
(Palkki, 2020)	International Journal of Music Education	United States	Transmasculine; transfeminine; agender; adolescent/s	3	Narrative study with case study design	Interview; observation; email/text correspondence	Fach/ voice part	Self-perception of voice; environmental factors	Registration	No
(Palkki & Caldwell, 2018)	Research Studies in Music Education	United States; Canada	Singer/s; LGBTQ students; adolescent/s	1123	Cross-sectional study	Survey	Nil	Environmental factors; wellbeing	Nil	No
(Rastin, 2016)	The Canadian Music Educator	Canada	Transmasculine; transfeminine; singer/s	N/A	Text and opinion	Vocal parameters; interview; perception of gender in voice	Fundamental frequency	Nil	Respiration; phonation; registration; resonance	No
(Saplan, 2018)	Choral Scholar	Not mentioned	Transmasculine; transfeminine; singer/s	N/A	Text and opinion	Expert opinion; literature	Fundamental frequency; pitch range	Wellbein	Respiration; phonation; registration; resonance	No
(Sauerland, 2018)	VOICEprints	United States	Transmasculine; transfeminine; non-binary; singer/s	N/A	Text and opinion	Vocal parameters; perception of gender in voice; professional experience	Fundamental frequency; Fach/ voice part	Environmental factors; wellbeing	Phonation; registration	No

gressions (Pitcher, 2017). Furthermore, the act of disclosure may increase the likelihood of violence or harassment (Wirtz et al., 2020). Researchers may have been exploring their own gender identity or may have perceived their gender identity as irrelevant to their role as a researcher.

Environmental Considerations

A strong theme in the studies reviewed was environmental factors that function as either barriers or facilitators for the engagement of transgender singers in choral contexts, and nearly all the studies proposed measures to promote gender inclusivity in these environments. Music can empower and liberate singers; conversely, it has the potential to limit and confine (Drake, 2018). Traditions and practices in choral repertoire and pedagogy may have negatively impacted the safety and educational experiences of transgender individuals (Finch, 2019; Sauerland, 2018). These challenges are particularly concerning, given that a lack of safety within choral environments can lead to absenteeism, which holds implications for both the individual singer and the collective ensemble (Rastin, 2016). Environmental considerations that arose included (a) gendered norms in choirs, (b) experiences of transgender singers in choirs, (c) the role of choral conductors, (d) experiences of choral conductors, and (e) suggestions for choral conductors.

Gendered Norms in Choirs.

Deeply entrenched binary and gender-exclusive norms in choral spaces have continued to affect the involvement of transgender singers (Finch, 2019). These have included choral practices that have traditionally been linked to gender, such as hetero- and cis-normative repertoire (Anzaldúa et al., 2022; Sauerland, 2018), gendered concert attire (Anzaldúa et al., 2022; Finch, 2019; Gurss, 2018; Miller, 2016; Palkki, 2020; Palkki & Caldwell, 2018; Rastin, 2016; Saplan, 2018; Sauerland, 2018), gendered language (Finch, 2019; Miller, 2016; Palkki, 2020; Palkki & Caldwell, 2018; Saplan, 2018; Sauerland, 2018), and disparities between the physical gender presentation of individual singers and choir standing arrangements (Finch, 2019; Palkki, 2020). Gendered choir labels such as 'men's' and 'women's' choirs (Finch, 2019; Palkki, 2020; Palkki & Caldwell, 2018) and voice part placements based on gender rather than voice type were also identified as problematic (Drake, 2018; Palkki, 2020).

Experiences of Transgender Singers in Choirs.

Though music ensembles, including choirs, were generally considered positive environments by 2SLGBTQ students, transgender students reported a higher prevalence of negative experiences, with most related to gender, harassment, or transphobia (Clayton, 2020). Positive aspects of participation for 2SLGBTQ/LGBTQI students included self-expression, acceptance, a safe space, and the opportunity to build relationships with other members of the community (Clayton, 2020; Drake, 2018). Choirs that were only open to transgender

singers, such as the Transcendence Gospel Choir, provided some singers with a place to affirm their gender identity, while others saw it as a place where "gendered identities take a backseat to a relationship with God" (Drake, 2018, p. 149). Clayton (2020) described how participation in musical ensembles may have offered an opportunity for the exploration and discovery of one's own gender identity.

Clayton's (2020) research indicated that the choral experiences of transgender singers differed from those of cisgender individuals in the 2SLGBTQI community. This observation was supported by the research of Palkki and Caldwell (2018), who found that transgender students often felt less comfortable disclosing their identity in choral settings compared to their LGBTQ peers. Importantly, there was a notable absence of research reporting specifically on the experiences of non-binary singers. Nevertheless, research has highlighted the heterogeneous experiences of non-binary singers in choral contexts as some individuals expressed feelings of alienation due to the gendered aspects of choir settings, while others reported satisfaction with their participation (Clayton, 2020).

The Role of Choral Conductors.

Choral conductors have played a pivotal role in shaping the prevailing culture of choral environments (Cates, 2022; Finch, 2019; Rastin, 2016). In choral environments where gender norms were upheld, singers perceived an absence of discourse around gender identity to be unwelcoming to transgender individuals (Palkki & Caldwell, 2018; Rastin, 2016). To foster a trans-inclusive environment, conductors can exemplify allyship for transgender individuals through active engagement in social activism, challenging biases, and intervening in instances of transphobic behaviour and language (Finch, 2019; Palkki & Caldwell, 2018; Rastin, 2016; Sauerland, 2018). Palkki and Caldwell's (2018) findings, however, revealed that many choral conductors fail to intervene in instances of anti-LGBTQ behaviour in choral spaces.

The creation of a gender-affirming and trans-inclusive choral environment depends on supportive faculty members and the implementation of inclusive curricula (Sauerland, 2018). Ongoing professional development focused on the experiences of transgender individuals may offer choral conductors insights into the psychologically-influenced vocal difficulties faced by some singers (Anzaldúa et al., 2022; Freer, 2019; Gurss, 2018).

To best support transgender students, choral directors should equip themselves with a comprehensive understanding of transgender singing voice pedagogy and establish connections with professionals specializing in this domain (Freer, 2019; Rastin, 2016). They can empower transgender individuals by facilitating conversations with transgender singers regarding their voice part preferences and conducting regular assessments of vocal ranges (Miller, 2016; Rastin, 2016; Sauerland, 2018).

When school choral directors in the United States were asked whether they had implemented gender-affirming practices in their choirs, 65% of those who responded 'no' said that it was because they had no transgender singers in their choirs and thus saw no need

(Cates, 2022, p. 252).

Rather than as a reactionary response to the inclusion of transgender members in a choir, best practice establishes gender-affirming choral environments proactively, with a view to benefiting all choristers regardless of gender identity. This proactive approach is pivotal to creating an atmosphere of acceptance that extends to all individuals (Clark, 2010, cited in Finch, 2019).

Experiences of Choral Conductors.

Beyond the experiences of transgender singers, several papers discussed the experiences of choral conductors. Freer described challenges faced by conductors whose religious beliefs may conflict with "prevailing professional discourse" (2019, p. 25) concerning transgender singers. Issues such as resistance to change, fear of offending transgender singers, and a lack of knowledge pertinent to transgender singing pedagogy emerged as potential barriers hindering conductors' engagement in trans-inclusive practices (Cates, 2022; Finch, 2019; Sauerland, 2018). Concerns were also raised about the impact on the ensemble sound and the experiences of other singers when a transgender singer's voice part is incongruent with their vocal capabilities (Freer, 2019). The elimination of gendered language was identified as a specific challenge for conductors seeking to adopt gender-affirming practices (Cates, 2022; Palkki, 2020). For conductors grappling with the reconciliation of their beliefs, Freer (2019, p. 29) advocated for the practice of ethical care in their interactions with transgender singers.

Cates' study of choral directors with experience teaching in schools in the United States found that 68% of those surveyed had experience teaching at least one transgender singer, and 78% had adjusted their practices in the choral setting to promote gender inclusivity (2022, p. 250). Notably, teachers who had prior experience working with transgender singers, had received training, or engaged with resources on transgender singing pedagogy were significantly more likely to implement gender-affirming practices. These outcomes underscore the necessity for more explicit training opportunities in the realm of transgender singing pedagogy. Such training may encourage a greater number of school choral directors to engage in gender-inclusive practices. Cates (2022) also reported that knowledge of medical and non-medical treatments was the area of least confidence for surveyed choral directors teaching transgender singers and called for training in this area.

Suggestions for Choral Conductors.

A number of studies examined offered various suggestions for ways to cultivate more trans-inclusive choral settings (Drake, 2018; Finch, 2019; Hirner, 2022; Miller, 2016; Palkki, 2015; 2020; Rastin, 2016; Saplan, 2018; Sauerland, 2018). One was the adoption of gender-neutral choral attire to mitigate the potential for gender dysphoria (Finch, 2019; Palkki, 2015). Finch (2019) cited Cayari's suggestion to incorporate either mixed seating arrangements or the option for transgender singers to be placed at the periphery of cho-

ral sections to make them feel more comfortable. This adaption considers the comfort of individual transgender singers and also addresses tangible concerns regarding safety, particularly when the visibility of transgender individuals may result in confusion and hostility among others (Drake, 2018). Language emerged as a pivotal enabler of gender-affirming practices. Using accurate names and pronouns (Finch, 2019; Miller, 2016; Palkki, 2015, 2020; Saplan, 2018; Sauerland, 2018), adopting non-gendered terminology when referring to voice parts (Finch, 2019; Miller, 2016; Rastin, 2016; Saplan, 2018), and substituting gender-inclusive choral nomenclature, such as "lower voices choir" in lieu of "men's choir," were proposed as more inclusive and accurate designations (Finch, 2019; Sauerland, 2018).

In some cases, transgender singers may express a desire to perform within a vocal range or voice part that presents challenges due to their current physiology. The use of gender-affirming hormones and surgical interventions may result in singing voices that deviate from the conventional SATB range norms. To address the evolving vocal needs of transitioning voices, Hirner (2022) recommended a practice called *line recombination*. This approach involves the creation of an intermediate vocal line by merging the alto and tenor lines of a musical composition. Establishing vocal lines within the range of A3 to F#4 facilitates the participation of most singers and accommodates the continued participation of singers who may be encountering a transient reduction in their vocal range in the initial stages of testosterone therapy (Hirner, 2022, p. 10). Sauerland (2018) echoed this proposition, suggesting that transgender singers be permitted to switch between voice parts, "mark" vocal lines or omit some notes as needed.

Vocal Considerations

Vocal considerations relevant to transgender singers in choral contexts discussed in the papers we reviewed included (a) gender-affirming hormone therapy, (b) gender-affirming vocal surgeries, (c) vocal exercises, (d) binding practices, and (e) vocal health.

Gender-Affirming Hormone Therapy.

The potential vocal impacts of gender-affirming hormone therapy have substantial implications for choral conductors who are formulating vocal exercises and selecting repertoire tailored to the needs of transgender singers (Sauerland, 2018). Some studies discussed the effects of gender-affirming hormone therapy on the voice but the resulting pedagogical considerations in the choral context were unaddressed.

Several papers examined the vocal effects of testosterone therapy (namely pitch lowering) for transgender singers, which was likened to the experience of AMAB voices undergoing testosterone-influenced pubertal vocal changes (Drake, 2018; Finch, 2019; Gurss, 2018; Hirner, 2022; Miller, 2016; Saplan, 2018). Important distinctions included the absence of vocal fold lengthening (Miller, 2016; Saplan, 2018; Sauerland, 2018) and a lack of laryngeal cartilage growth for those undergoing testosterone therapy, resulting in a comparatively smaller vocal tract compared with cisgender males (Saplan, 2018).

Findings indicated significant variability in the vocal experiences of individuals undergoing testosterone therapy, contingent upon factors such as dosage, age, vocal development, and individual hormonal composition (Drake, 2018; Gurss, 2018; Hirner, 2022; Sauerland, 2018). Gurss (2018) suggested that higher dosages of testosterone may pose a heightened risk of vocal damage. While some individuals navigate their vocal transition with relative ease, challenges encountered by others included (a) vocal fatigue, (b) hoarseness, (c) reduced range, (d) insufficiently lowered pitch, (e) a loss of falsetto register, and (f) difficulties in singing (Drake, 2018; Miller, 2016; Saplan, 2018; Sauerland, 2018). The stabilization of an individual's singing voice during testosterone therapy can take between two and six years (Hirner, 2022; Miller, 2016). Miller advised singers to engage in gentle and consistent vocalization throughout their transition (2016). For individuals encountering vocal difficulties, Saplan (2018, p. 5) recommended the avoidance of open vowels, instead suggesting fricatives and lip trills to explore their voice.

In contrast to testosterone, estrogen does not induce alterations in a singer's physiology or vocal range (Finch, 2019; Gurss, 2018; Palkki, 2020; Rastin, 2016; Saplan, 2018; Sauerland, 2018). While Miller (2016) posited that individuals commencing estrogen therapy at a younger age will likely experience vocal fold thinning and a raised vocal pitch, this perspective is not corroborated elsewhere in the analyzed literature. Vocal challenges associated with estrogen therapy may include vocal fatigue, decreased vocal power, and a reduction in pitch range (Rastin, 2016).

Gonadotropin-releasing hormone (GnRH) analogues, also known as puberty blockers, were mentioned in one paper that suggested vocal resonance may be impacted due to the delayed initiation of development on the ribcage and skull (Hirner, 2022).

Gender-Affirming Vocal Surgeries.

Vocal fold shortening surgeries were discussed in the context of vocal feminization, although the studies provided limited insights into their implications for singing. Vocal surgeries were characterized as high-risk procedures for singers and were generally discouraged (Hirner, 2022; Sauerland, 2018).

Vocal Exercises.

Several studies included vocal exercise recommendations for transgender singers, including specific exercises for transfeminine and transmasculine singers, respectively. Gurss (2018) presented specific vocal exercises applicable to all transgender singers, regardless of gender identity. These exercises included strategies for breath management and a "bringing the head voice down" approach (Gurss, 2018, p. 88). Additionally, Saplan (2018) provided specific vocal exercises tailored to the unique requirements of both transfeminine and transmasculine singing voices. These exercises primarily focused on diaphragmatic breathing and the use of semi-occluded vocal tract postures.

Transfeminine singers seeking to achieve a higher vocal range may benefit from speech

therapy (Drake, 2018; Rastin, 2016; Saplan, 2018; Sauerland, 2018). Vocal therapy typically involves modifications in resonance, vocal quality, and speaking intonation, with the potential to influence one's singing voice (Saplan, 2018). Saplan (2018) recommended the use of semi-occluded vocal tract exercises to enhance respiration and phonation while promoting head voice registration. Exploring falsetto registration through vocal exercises may enable transfeminine singers to sing alto or soprano voice parts (Gurss, 2018; Miller, 2016; Sauerland, 2018). Participating in choirs may also assist transfeminine singers in extending their range (Drake, 2018).

In the case of transmasculine singers who are not undergoing testosterone therapy, Sauerland (2018) suggested focusing on maintaining consistent airflow, minimizing vocal strain, and avoiding over-pressurization.

Chest binding practices.

Some singers may use chest binding as a strategy to decrease feelings of dysphoria stemming from the presence or sensation of chest tissue. This practice can have notable effects on a singer's posture and breath management, leading to shallower breaths and decreased lung strength (Finch, 2019; Gurss, 2018; Rastin, 2016; Saplan, 2018; Sauerland, 2018). The papers reviewed provided limited guidance on assisting singers in navigating the act of singing while wearing a binder. Suggestions were to reinforce "proper diaphragmatic breathing" (Saplan, 2018, p. 5) and to incorporate more frequent breaths as required (Sauerland, 2018).

Vocal Health.

Many choral conductors voiced concerns about the vocal health of transgender singers in choral contexts (Cates, 2022; Palkki, 2020; Rastin, 2016; Sauerland, 2018). While acknowledging the importance of vocal health, Sauerland (2018) argued that wellbeing should remain the priority. Sauerland stated, "We mistreat our voices daily by talking in loud restaurants or cheering at sports events," and suggested that equipping students with good technique and vocal hygiene may be more impactful than restricting the way in which they use their voice (2018, p. 99). Cis-normative expectations of what a voice "should" sound like may lead to the incorrect identification of vocal health concerns among transgender singers, as reported by a participant in Drake's research (2018). Choral conductors' poor understanding of the unique vocal considerations pertaining to singers undergoing testosterone therapy can give rise to the potential for vocal damage and emotional distress for transgender singers (Rastin, 2016). Singers undergoing testosterone therapy may require additional vocal rest or accommodations, underscoring the vital role that choral directors play in providing support to singers during this potentially difficult time (Rastin, 2016).

Anti-androgen medications, that frequently accompany estrogen therapies, may have a dehydrating effect on the voice, which may lead to vocal health implications (Hirner, 2022). Some transgender individuals may engage in potentially damaging vocal behaviours in an

effort to produce their desired vocal qualities. As an illustrative example, one transmasculine participant reported the emergence of vocal nodules due to their attempts to sing and speak in a lower range (Palkki, 2020, p. 10). To promote and maintain vocal health, all transgender singers should be encouraged to adhere to sound vocal hygiene practices (such as adequate hydration) and engaging in comprehensive vocal warm-up and cool-down routines for each choral session (Sauerland, 2018).

Ragan's Systems of Voice Production

As Ragan's (2020) systems of voice production incorporated the primary mechanisms involved in singing, examining which of these were addressed in the literature we reviewed gave us one way to determine whether all areas relevant to singing have been explored in relation to transgender singers in choral contexts. While the systems of voice production were not discussed directly, various vocal elements that impact these systems were discussed and are documented in Table 1. Elements relating to at least one system of voice production were mentioned in 10 of the 15 studies. Phonation-related elements were mentioned most frequently ($n = 8$), followed by registration ($n = 6$), resonance ($n = 4$), and respiration ($n = 3$). Articulation was briefly mentioned in a study by Drake, where one participant suggested that "women enunciate well" (2018, p. 133).

Bodymind and Voice

Unique considerations for the enmeshed bodymind and voice of transgender singers were highlighted by the findings of some studies. These can have profound implications, particularly pertaining to the mental health and overall wellbeing of this population. The heightened vulnerability of transgender youth to mental health concerns, suicide attempts, and trauma emphasises the necessity of establishing safe, trans-inclusive environments for these individuals, particularly for transgender individuals of color, who experience higher risk factors (Finch, 2019; Gurss, 2018). Sauerland (2018, p. 99) proposed a shift in perspective, emphasizing that a singer's mental and emotional wellbeing should take precedence over vocal health considerations.

Gender Identity and the Singing Voice.

The findings of the studies reported here suggest that the psychological and emotional aspects of voice and gender identity play a significant role in the experiences of transgender singers, with a need for more inclusive and supportive environments to provide optimal care. There can be a complex interplay between gender identity and the singing voice and not all individuals aspire to have a voice that conforms to traditional gender binary expectations. As one singer stated, "I'm a girl and I'm a bass, and I own that. It makes me unique..." (Palkki, 2020, p. 6). This highlights the varying ways in which voice and gender identity are interconnected for different individuals. Palkki stressed the importance of engaging in meaningful conversations with individuals about their chosen voice part

(2020). Transgender singers form a heterogeneous group, and their experiences of gender in relation to their voice vary significantly from one singer to another (Rastin, 2016). Saplan (2018) encouraged conductors to recognise gender identity and voice type as distinct, independent elements of a singer.

Voice-Related Gender Dysphoria.

The manifestation of voice-related gender dysphoria may occur when an individual's singing voice does not align with their gender identity (Hirner, 2022; Rastin, 2016). Requiring a singer to perform a voice part that makes them uncomfortable can have profoundly adverse emotional consequences, characterized as "emotionally devastating" (Sauerland, 2018, p. 100). According to Rastin (2016), inadequate educational resources for singers and choral directors regarding voice management during vocal transition can lead to increased feelings of dysphoria. Consequently, this dysphoria may deter singers. For example, one individual expressed a potential desire to sing more if their vocal pitch were higher (Rastin, 2016, p. 29). Clayton (2020) examined transgender men's experiences of voice-related gender dysphoria. Several participants reported experiencing dysphoria related to gendered voicing in gendered choirs or ensembles. Additionally, transgender individuals undergoing testosterone therapy expressed feelings of self-consciousness regarding their transitioning voice and a sense of diminished vocal proficiency, which complicated their participation in choirs (Clayton, 2020). For some singers, gender dysphoria may manifest as a form of performance anxiety stemming from the incongruity between their desired self-presentation and how they feel an audience is perceiving them (Drake, 2018). Finch (2019) described how the enforcement of binary concert attire may exacerbate feelings of dysphoria for some individuals in choral contexts as well.

Voice-Related Gender Euphoria.

In contrast to the phenomenon of gender dysphoria, singers may also experience instances of gender euphoria. Gender euphoria denotes the positive emotions that individuals experience due to the affirmation of one's gender identity (Jacobsen & Devor, 2022). Within choral contexts, this phenomenon can occur when individuals are able to sing within a vocal range, voice parts, timbre, or specific repertoire that aligns with and affirms their gender identity. Such experiences that result in gender euphoria can serve to encourage continued participation in choirs for transgender individuals (Drake, 2018).

Conclusions

Over the past decade, research on transgender singing voices has made significant progress, yet there remains a notable gap in the practical guidance available to choral conductors seeking to support transgender singers. Although the current body of literature on transgender singing within choral contexts remains relatively limited, it reflects an increasing awareness of the unique challenges faced by transgender singers, and a growing

commitment to promoting gender inclusivity. The findings of these studies emphasize the profound influence of language and culture on the experiences of transgender singers, while also providing strategies for choral conductors to adopt gender-affirming practices.

The (a) respiration, (b) phonation, (c) registration, (d) resonance, and (e) articulation systems (Ragan, 2020) were acknowledged within the literature. Their direct pedagogical application for transgender singers, however, remains largely unexplored. Two studies described specific vocal exercises, including the utilization of semi-occluded vocal tract exercises, diaphragmatic breathing techniques, and experimentation with vocal registration to facilitate the vocal development of transgender singers. The literature overall, however, lacks robust evidence to substantiate the efficacy of the exercises within the specific population of transgender singers, which raises concerns regarding the generalizability of these approaches to the diverse population of transgender vocalists.

Voice-related gender dysphoria emerged as a salient concern affecting the experiences of some transgender singers in choral environments. Although practices such as binding, gender-affirming hormone therapy, and surgical interventions were mentioned, there is a paucity of guidance for supporting singers through potential vocal difficulties that may arise from these practices.

The nature of choral settings, characterized by their group dynamics and collective performance objectives, adds an additional layer of complexity when attempting to address the individual challenges and requirements of transgender singers (Finch, 2019). Choral environments may not always afford the flexibility to address the distinct needs of each singer, making the pursuit of pedagogical strategies tailored to individual transgender choristers a complex endeavour. Choral conductors are encouraged to pursue further professional development and establish networks with singing teachers and speech pathologists with additional knowledge of transgender voices to provide support for transgender singers experiencing vocal difficulties.

Limitations

While providing valuable insights into the environmental considerations of accommodating transgender singers within choral contexts, this review is not without limitations. The studies themselves displayed limitations, and this review had its limitations.

Limitations of the Studies Reviewed

One of the limitations of numerous studies was the small number of participants. Most studies lacked diversity among participants, characterised by inadequate representation of individuals from varied racial, socioeconomic, and intersectional backgrounds, raising concerns regarding the applicability of the findings to these underrepresented groups. Drake (2018) highlighted the intricacy of experiences that emerge when gender intersects with other identity designations, which suggests that an exclusive focus on gender identity, in isolation, as a determinant of one's experience is inadequate and non-generalizable. In

two studies transgender participants were only considered within the broader category of the 2SLGBTQ/LGBTQ community (Clayton, 2020; Palkki & Caldwell, 2018). Attributing experiences to "most participants" (Clayton, 2020, p.34) led to challenges determining whether these experiences applied to transgender participants. The experiences of non-binary singers were under-represented and further research energy could be focused there.

Many studies used only text- and opinion-based research methods. The lack of empirical evidence has meant that most information is anecdotal and difficult to generalize. There is a need for further research employing empirical methodologies to establish a higher level of evidence for the recommended practices and strategies.

Limitations of This Review

The search returned a small number of studies relating to transgender singers in the choral context. There was insufficient research for a systematic review in this area or for the findings to be generalized yet.

There were some limitations in the search terms we used. Due to character limits in some databases, it was not possible to include every word used to refer to transgender people in the search string, so we tried to use the most common terms in our experience, however, some articles may not have been included as a result. As this was part of a larger scoping review focused on singing, the terms we used were not directed explicitly towards choral contexts, so it is possible that some relevant studies were not captured by the singing search terms.

All the studies we have reported on were undertaken in the United States and Canada, except for one study where the location was not reported. There is evidently a need for research from all other areas of the world where choral singing takes place. As this study was limited to research published in the English language due to the challenges of searching across multiple languages and translating documents, it is likely that relevant research has been published in languages other than English.

We excluded book chapters and grey literature from this study to determine what peer-reviewed research has been published. While many books have undergone a peer-review process, this was not always transparent. There was extensive grey literature in the transgender space which contained valuable knowledge from the lived experience of individuals. Some examples of this grey literature included relevant subreddits on Reddit (Reddit, n.d.a; Reddit, n.d.b), YouTube channels specific to transgender singing (Gress, n.d.; TransVoiceLessons, n.d.), and websites that specifically addressed the needs of transgender singers (Gala Choruses, n.d.; Blurring the Binary, 2023).

Areas for Further Research

The dearth of comprehensive information for choral conductors underscores the urgency for additional research in this area encompassing the diverse experiences, motivations, and goals of members of the transgender community in choral contexts. Areas for further

research called for by the studies in this review include (a) longitudinal studies of transgender singers who commence physical and/or hormonal transitions before the onset of puberty (Gurss, 2018), (b) the intersection of gender and race (Palkki, 2020), (c) vocal health and pedagogical implications for transgender singers (Palkki, 2020), and (d) a more comprehensive understanding of adolescent transgender voices and non-binary voices (Sauerland, 2018).

From reviewing relevant studies, we have identified additional areas where further research is needed. Of direct importance for choral conductors is research that provides specific pedagogical approaches to support transgender singers in their diverse vocal situations, including singers undergoing gender-affirming hormone therapy and those choosing not to. Further research is required on pedagogical implications of vocal surgeries and pedagogical strategies for singing with binders in choral contexts. Our analysis of the prevalence of Ragan's systems of voice production revealed that these systems were only addressed indirectly in the research, and it would be beneficial for research to focus on each of these systems to ensure a holistic approach to the vocal mechanism is considered in relation to transgender singers in choral contexts. While some studies report on the experiences of transgender singers, growing this body of lived-experience accounts would likely contribute to a richer understanding and inform pedagogical approaches. Of particular interest to choral conductors would be research on the impact of the gender-affirming practices endorsed by the studies we have discussed.

In addition to these practical applications of research, it is important for researchers to consider the way research is being conducted and who is conducting it. The significance of transgender researchers contributing to this field cannot be underestimated. Transgender people are best placed to know what will be most impactful for members of their community and the best ways to carry out research with transgender participants. Choral conductors, researchers, and members of the transgender community should continue to work together to promote trans-inclusivity within choral environments and develop evidence-based practices for teaching and working with transgender singers. Further research may also illuminate whether the vocal health concerns held by many choral conductors are founded.

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Article

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Validating and Piloting a Choral Educator Questionnaire: The Use of Culture Bearers and Pedagogical Implications of Singing in Multiple Timbres

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Abstract

Many educators strive to enact culturally relevant practices by introducing repertoire of various cultures and genres. One major barrier to this implementation includes the variety of vocal sounds inherent in traditions outside those generally presented in choral environments within the United States of America. In this study, I validated and piloted a choral educator questionnaire. I designed the survey to solicit information about the use of vocal pedagogy in the ensemble classroom. In the survey, I also asked about educators' use of vocal pedagogy as related to issues of vocal health and teaching non-Classical repertoire. After reviewing methodologies used in prior choral education survey studies, I chose to validate the questionnaire through a cognitive interview process. This process yielded a revised questionnaire that a small sample of choral educators piloted. Results of these two phases culminated in a final questionnaire for use with a larger sample.

Keywords: choral pedagogy, vocal pedagogy, culture bearer, vocal health, validity, pilot

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Validating and Piloting a Choral Educator Questionnaire: The Use of Culture Bearers and Pedagogical Implications of Singing in Multiple Timbres

Issues of cultural relevance between the type of music taught and the type of students singing it permeate choral classrooms in the United States of America (Jenkins, 2022; Kratus, 2007; Williams, 2011). While many educators strive to enact culturally relevant practices by introducing repertoire of various cultures and genres, major barriers to their implementation include the variety of vocal sounds inherent in traditions outside those generally presented in choral environments within the United States of America (Bennett, 2021). Categorical thinking, in this case between vocal timbres generally inside or outside choral classrooms, may deleteriously invite essentialism, erect false borders, or reinforce misleading narratives (Rodríguez, 2022). I decided, however, that an investigation of how choral educators handled sounds of various repertoire required some characterizations. In this study, I used the phrase Western Classical as common parlance to indicate the diaspora of art music conventionally thought of as originating in ancient Greece and evolving throughout Western Europe (Kajikawa, 2019). As the sounds of this music characterize the standard timbres in choral classrooms, for the purposes of this study I characterized other timbres as non-Classical. Additionally, the U.S.A. contains musical idioms like pop, Broadway, Jazz, spirituals, gospel, etc. I characterized these as familiar, non-Classical timbres as the intended participants would likely possess some familiarity with these timbres. For example, a pop song by a contemporary artist uses different vocal timbres than a work by Mozart or Beethoven. Finally, I used the term unfamiliar, non-Classical to characterize timbres found in music not encapsulated by the other two classifications. Art music sounds and practices akin to Western Classical ones exist globally (Inoue, 2018). Unfamiliar, non-Classical sounds, in this paper, refer to music included in choral classrooms under the umbrella of "multiculturalism" (Campbell, 2021). According to Campbell, multiculturalism in the classroom includes efforts to explore vernacular musical traditions outside of the typically Eurocentric ones considered "school music." For example, traditional Bulgarian singing uses different vocal timbres than those generally taught in choral classrooms (Stefanova & Speed, 2023).

To make culturally relevant sounds, the singer needs to know how to make stylistically appropriate vocal choices (Goetze, 2017). According to Goetze, teaching others to sing in multiple styles poses vocal health and vocal pedagogy challenges for the choral educator. Recent scholarship encourages partnerships with "culture bearers," members of specific musical traditions, when teaching non-Classical music (Bennett, 2021; Norwood et al., 2018). Culture bearers help select and authentically teach varied sounds and stories. Little evidence exists, however, of the widespread adoption of this practice. Choir teachers, due to the nature of their discipline, serve as *de facto* vocal instructors (Wolverton, 1989). As most choral students do not study voice individually with a vocal instructor, they acquire the majority, if not all their singing technique in choir. A 2017 survey of universities in the

U.S.A. revealed, however, that out of 61 institutions offering music education coursework, only 39.5% required a single course in vocal pedagogy (Hansen, 2017).

For many students, their choir director(s) will be the only vocal instructor(s) they encounter (Wolverton, 1989). In what ways (if any) do choral teachers address issues of varying vocal timbres? How do they feel about their ability to address timbrel issues through vocal-pedagogical means? What impacts on student vocal health do they feel their pedagogical choices make? Do they recruit the aid of culture bearers, and what vocal pedagogy choices happen when this occurs? I decided to pose these questions, and others, to choral educators through an online questionnaire. As part of the research process, I chose to validate and pilot the questionnaire. Detailing this activity encompasses the remainder of the current study. Survey validation increases construct validity, reliability, consistency, comparability of teacher experiences, and overall future results (Porter et al., 2010; Darling-Aduana, 2021). To begin, I reviewed the methodologies of previous choral music education surveys. This review guided my selection of validation methods prior to piloting the questionnaire.

Literature Review

Validation Methods in Choral Music Education Surveys

While all research methods include strengths and weaknesses, in education, self-report surveys have been effectively implemented to assess teachers' pedagogical strategies, as well as the type and quality of their professional development (Desimone & Le Floch, 2004). In choral music education, recent surveys assessed teacher preparation to work with diverse learners and social emotional needs (Culp & Salvador, 2021; Culp et al., 2023), choral conducting behaviors and pedagogies (Regier et al., 2022), interest in teaching choir after taking methods courses (Kim, 2022), beliefs and behaviors related to rehearsal approaches (Ganschow, 2014), vocal health at an All-State choral event (Daugherty et al., 2011), choral directors' multicultural teaching practices and attitudes (Bennett Walling, 2016), and the prevalence of vocal health and anatomy and physiology education among choral educators (Grady & Brunken, 2022).

Researchers from these studies employed three reoccurring strategies to increase survey validity: basing survey construction upon previous surveys and related literature (Culp & Salvador, 2017; Culp et al., 2023; Daugherty et al., 2011; Grady & Brunken, 2022) procuring content feedback (Culp & Salvador, 2021; Regier et al., 2022), and pilot testing (Bennett Walling, 2016; Culp et al., 2023; Ganschow, 2014; Grady & Brunken, 2022; Regier et al., 2022). In the case of Culp & Salvador's 2021 study, the researchers adapted a previously used survey (Salvador & Kelly-McHale, 2017) which underwent a piloting phase as well. The 2023 study by Culp et al. further adapted these previously used surveys. Piloting phases generally utilized between five and ten testers. When researchers procurred content feedback, two (Regier et al., 2022) and five (Culp & Salvador, 2021) individuals participated.

According to Messick, author of *Educational Measurement* (1989), construct validity relies upon either and sometimes both content and criterion. Content should represent

the domain it covers with high relevance, and criterion should specifically measure the relationship between an applied purpose and applied setting. For example, measuring the inclusion and exclusion criterion for study participation should factor in the relationship between the purpose and setting of the study. The reviewed surveys, as well as this one, focused on either content validity via construction, feedback, and piloting, or criterion validity via piloting. Sometimes both foci occurred. In all cases, researchers employed what Lissitz and Samuelson called test definition and development as a first step in establishing content validity (2007). This "first…and the most basic step" (p. 446) occurs through relating test content to the subject domain. Only one set of researchers (Daugherty et al. 2011) ceased their validation process at this step, creating their survey tool as an adaptation of previous investigations. All other studies involved a pilot phase. Piloting phases foremost check for feasibility, or whether respondents will complete the survey (Porter et al., 2010). Beyond this, pilot testing enhances content validity by checking item intelligibility, unambiguity, bias, and competency—or its ability to handle many possible response types (Stone, 1993). For instance, a participant might desire the missing option "none of the above" as a response to a multiple choice, opinion question. Two studies (Culp & Salvador, 2021; Regier et al., 2022) procured content feedback. This step reinforces the iterative process of increasing content validity by soliciting recommendations from experts or representatives of the selected population (Darling-Aduana, 2021; Porter et al., 2010). Culp & Salvador asked members of the targeted population for feedback (2017), while Regier et al., consulted with domain experts (2022).

For this study's questionnaire, I employed all three strategies to increase overall validity, consistency, comparability of teacher experiences, and future results (Porter et al., 2010; Darling-Aduana, 2021). First, I developed the survey considering the subject domain and previous investigations by Bennett Walling (2016), Daugherty et al. (2011), and Grady & Brunken (2022). Second, I procured feedback from both experts and participant representatives through a cognitive interview process (Desimone & Le Floch, 2004; Porter et al., 2010). Finally, I piloted the questionnaire with a small sample of choral educators. To guide the validation process, I asked the following research questions. (1) What items should be included that investigate choral teachers' vocal pedagogy attitudes and timbrel choices, pedagogical impacts on vocal health, and their use (if any) of culture bearers? (2) To what extent is the developed questionnaire valid, reliable, consistently comparable, and well-constructed?

Methodology

Program Description

The study followed an exploratory sequential design (Tashakkori et al., 2021) where the qualitative phase begins the study, followed by a quantitative phase. Researchers traditionally use this design in the development of new surveys so that results from quantitative data confirms the initial qualitative exploration (Munce et al., 2021). Combined and trans-

formed results informed the final edits of the validated and piloted questionnaire. A cognitive interview process (Desimone & Le Floch, 2004; Porter et al., 2010) constituted the first phase. I collaborated with highly trained individuals to engage with and examine the drafted questionnaire for content and construction. I submitted the drafted questionnaire to five individuals from either choral education or survey design backgrounds. Participant responses provided editorial feedback on the quality of the drafted questionnaire. I analyzed interview responses through a two-tiered coding protocol (Saldaña, 2021) in NVivo 14. I began with a *priori* codes, found in Table 1, derived from my proposed research questions.

In phase two, nine choral educators piloted the revised questionnaire. This iteration included an additional question that solicited general feedback on the quality and content of the questionnaire. I analyzed responses for comparison between first phase and second phase participant groups. I utilized results in the completion of a final drafted questionnaire. Google Forms, which hosted the pilot questionnaire, collected data for the initial analysis. By completing these two phases, the resulting survey better (a) applies to a variety of settings, (b) possess construct validity (c) provides reliability of results, (d) eschews bias, (e) predicts outcomes, and (f) yields pedagogical profiles (Porter et al, 2010).

Table 1.
Analysis Codes

First-tier/Parent codes	Second tier/Child codes
Construction	Response Style Question Order Missing or Added Information Clarification
Vocal Pedagogy	Vocal Health Teacher Choices Teacher Attitudes
Validity	Unfair Leading Biased
Culture Bearer	Often cross-coded with Construction and Validity
Demographics	Often cross-coded with Construction and Validity

Positionality Statement

As a co-participant in the semi-structured interviews, the disclosure of my positionality provided both transparency and limitations to the study. My educational and professional background consists of 15+ years of work as a choral educator, vocal instructor, and student of voice science. My academic leanings prioritize pragmatic and empirical findings that may deprioritize other ways of knowing (intuitive, anecdotal, affective, sympathetic). When listening to participants and analyzing data I maintained reflexivity and awareness of this positionality, an adaptation of reflexive journaling (Tashakkori et al., 2021). By adhering foremost to the above-stated research questions, I endeavored to mitigate my biases. I furthermore acknowledged that human individuals perform research, underscoring the need to maintain reflexivity.

About the Choral Educator Questionnaire

I designed the choral educator questionnaire to examine some of the gaps left unaddressed in the previous literature and to incorporate adaptations of questions used in prior investigations (Bennett Walling, 2016; Daugherty et al., 2011; Grady & Brunken, 2022). In addition to updating the prevalence of vocal pedagogy instruction among choral educators (Hansen, 2017), I asked for specific resources teachers referenced for vocal pedagogy. I surveyed domestic respondents and their use of culture bearers, which compliments the previous study of international educators (Bennett Walling 2016). I also asked respondents to consider specific teaching practices related to singing music from multiple styles and cultures. Importantly, the design of survey items elicited preferential or frequency rankings of vocal pedagogies, assessments of attitudes towards teaching a variety of vocal timbres, and the preference and frequency of implementing vocal health strategies. I designed the structure of the questions and statements to investigate the above phenomenon from multiple standpoints, thereby potentially providing multiple related data points. I used feedback from this validation and piloting phase to develop a final questionnaire.

Sample and Setting

Cognitive interviewees consisted of three choral educators and two education and social policy professors. These two professors possessed extensive research and survey development experience. I recruited the choral teachers from my professional network of education colleagues. I previously worked with one in a professional capacity that was not education related. These participants all possessed graduate level degrees; however, their awarded degrees came from different geographical regions. Their work experience included 6 years, 11 years, and over 20 years. One reported high familiarity with vocal pedagogy, one reported moderate familiarity, and one reported they felt lacking in their knowledge. The two professors came from the same university department though one sits at the beginning of their career, and one nears retirement age. One professor possessed a speech and

language background.

I recruited the nine pilot testing participants from my personal network of colleagues. I employed no exclusionary measures based upon level of experience, types of educational institution, or level of education. Of the participants ($N = 9$), 77.8% held master's level degrees, and one each held an undergraduate and doctoral degree respectively. The teachers represented all levels of choral classrooms including elementary through undergraduate levels. High school classrooms ($n = 5$) hosted the largest number of participants. The least experienced participant possessed one year of teaching experience, and the most experienced held over twenty years' experience, with the largest group ($n = 4$) holding 11-20 years of experience. Of the participants, 66.7% taught non-classical singing classes such as a musical theater course as part of their employment. All participants returned informed consent-forms that explained their involvement with the study in accordance with Georgia State University's Institutional Review Board. Results from piloting the questionnaire yielded the following additional demographics.

Choral Educator Demographics – Schooling

All respondents ($N = 9$) reported taking courses about vocal pedagogy. All but one ($n = 8$) studied diction, and less than half ($n = 4$) studied acoustics or physics of sound. Eight (88.9%) took at least one of these courses as a required part of their undergraduate degree program. Four elected to take at least one of these courses as part of their undergraduate degree program. Three were required and three elected to take these courses as part of their graduate programs. Three took these types of courses as part of a workshop or conference experience.

Choral Educator Demographics – Institutional Information

Participants taught an average program size of 88 singers, with the largest teaching 200 singers and the smallest teaching 10 singers. While 77.8% ($n = 7$) of participants reported teaching majority White/Caucasian students, 11.1% ($n = 1$) reported majority Non-White and 11.1% ($n = 1$) reported almost exclusively Non-White students. No participant reported their program as almost exclusively White/Caucasian. Eight out of nine reported the socio-economic status of their students as medium (55.6%) or low (33.3%) with only one (11.1%) reporting high socio-economic status. Two participants listed vocal pedagogy textbooks they currently use.

Qualitative Cognitive Interviews

Semi-structured, cognitive interviews occurred virtually during a mutually agreed upon meeting time between the investigator and interviewee. I audio recorded each interview. The interviewee engaged in a "think aloud interview," where respondents engaged in a running commentary as they worked through items. They remarked on the clarity and ac-

curacy of items, how items reflected their experiences, and what items might be missing. I further probed responses using selected questions from a protocol that gauged participant understanding of each item's intent (Desimone & Le Floch, 2004). I included the protocol in Appendix A.

Results from these interviews informed the initial editing of the drafted questionnaire. Threats to survey validity often occur due to the complexity of a phenomenon, respondents desiring to give socially acceptable responses, and respondents providing misleading data (Desimone & Le Floch, 2004). Cognitive interviews address these threats due to the meta-cognitive task of engaging with the survey, alongside the investigator, and detailing their experience. The investigator then modifies each item for effectiveness. I encouraged each participant to provide critical feedback freely and honestly on the construction and content of the questionnaire. Accordingly, participant responses varied, agreed, and conflicted. Each focused on differing aspects of the questionnaire depending on participant interest and expertise. The approximately five hours of interviews yielded 244 parent and child codes pertaining to the 31-question survey. The interviews yielded four frequently discussed themes: (1) clarifying language, (2) adding demographically related items, (3) mitigating survey bias in relation to issues of pedagogy and culture, and to a lesser degree, (4) considering item order, response type, and the delineation between survey sections.

Quantitative Pilot Data Collection

I used Google Forms to collect data in the form of Likert-style response questions to gauge issues of comfortability, frequency, and agreement regarding issues related to the use of vocal pedagogy for teaching various timbres. The National Association of Teachers of Singing stresses the importance of voice science as a "flag bearer" of vocal pedagogy (Edwin, 2020; McCoy, 2020), therefore I crafted response options that utilized varying degrees of voice science-related knowledge. The survey also contained ranked order questions, selected response items, demographic questions, and brief narrative prompts. All nine participants answered each question except one participant skipped item 16 which asked about mitigating issues of vocal health. They did not offer an explanation in their comments.

Analysis

I analyzed the cognitive interviews in a two-tiered coding system adapted from Saldaña's 2021 text *The Coding Manual for Qualitative Researchers.* I established the first-tier, parent codes a priori based upon my research questions: Construction, Vocal Pedagogy, Validity, Culture Bearer, and Demographics. Though demographics did not appear in my research questions, the first two sections of the survey included demographically related questions. The second coding phase examined common areas of feedback and identified their appropriate locations within the questionnaire. I often cross-coded the first-tier codes Culture Bearer and Demographics with Construction and Validity. Second-tier, child codes

emerged from participant responses. I listed these in Table 1.

I employed a third coding phase to investigate common language or suggested edits that aided in formatting the questionnaire items for initial piloting. As a result, the final questionnaire included 31 items, an increase from the initial 24. Nineteen items changed, including the seven added items, based upon participant feedback. Each interviewee offered feedback that I incorporated immediately thereafter and prior to subsequent interviews. This happened most frequently when typos, grammatical issues, verb-choice, and response-style suggestions occurred. For instance, one participant recommended that in the prioritization questions, where survey respondents could only select an option once, I use the verb "rank" rather than "rate" because "rank" more directly implied selecting an option only once. During the interview process, I added two questions after the first two interviewees remarked upon the need for demographic information about racial and socio-economic data. At this same time, I noticed that the survey lacked a question that directly asked if teachers used culture bearers. I added this question prior to the final three interviews as well. The other three participants suggested edits to those added questions. Next, I gathered descriptive statistics from the embedded features in Google Forms and compiled composite scores as well as percentages based upon respondents' answers. I qualified these statistics in combination with analyzed themes found in the narrative responses and cognitive interviews to identify potential future responses regarding pedagogical strategies and gaps that might appear a full-scale study.

Results

In this validation and pilot study, I asked two research questions that pertained to the creation of a choral educator questionnaire. (1) What items should be included that investigate choral teachers' vocal pedagogy attitudes and timbrel choices, pedagogical impacts on vocal health, and their use (if any) of culture bearers? (2) To what extent is the developed questionnaire valid, reliable, consistently comparable, and well-constructed?

Cognitive Interview Results

The initial survey consisted of 24 items organized into 7 sections. The revised survey expanded to 31 items over 9 sections, and 19 total items received edits based upon participant responses. In Table 2 on the next page, I summarized the revisions to each section. Each of the nine sections of the survey included instructions to the survey-taker. The first section consisted of a welcome and overview. Three out of five interviewees acknowledged not reading the instructions, however, all five agreed to keeping them. Two cautioned that instructions remain descriptive rather than include critical information. The next three sections solicited demographic information related to schooling, institutional information, and professional practices. They included 11 total items. Initially a singular section of 9 items constituted the demographic portion of the survey. Four items related to institutional information (socio-economic status, diversity make up, type of institution, and choral pro-

Table 2.
Summary of Revisions

Section	Revisions
Welcome and Overview	None
Demographics: 9 items	11 items. I split these items into three sections: Schooling & Training, Institutional Information, and Professional Practice.
Vocal Pedagogy Choices: 3 items	3 items. In this now fifth section, I clarified frequency statements.
Vocal Health and Wellness: 2 items	2 items. In this now sixth section, I clarified verbiage and response language.
Vocal Tone Choices: 3 items	3 items. In this now seventh section, I clarified verbiage and response language.
Comfortability: 7 items	10 items. In this now eighth section, I added items about culture bearer usage and an item to mitigate potential bias.
Short Response: 2 items	2 items. In this now ninth section, I changed language in item 1 for open-endedness and clarified language in item 2.

gram size) were added and three items about schooling were condensed into two. Initially all items but one required multiple-choice responses. The two survey-experienced participants suggested edits in response styles so that certain items yielded continuous rather than categorical data. One item required users to list content-related resources.

Section five consisted of vocal pedagogy-related items formatted in Likert-style responses. These items were adaptations from Grady & Brunken's 2022 survey, where researchers asked how strongly respondents agreed they talked about certain aspects of vocal pedagogy. Grady & Brunken asked for an estimated percentage of frequency across total rehearsal time. I oriented my questionnaire towards specific pedagogies and the frequency of their use. One participant remarked that the item discussing resonance lacked an option for teaching about vocal acoustics. I added this option. Additionally, in this section of the survey I examined the frequency with which choral educators used certain pedagogical choices when teaching singing. After reviewing the three educator transcripts, a common conflict between frequency and importance emerged. Based upon the response options of "most of the time," "often," "sometimes," "rarely," and "never," all three participants gravitated

towards "most of the time" and "often" and away from the other options. To me, this indicated importance superseding frequency of the strategies as it seems unlikely that each educator utilized all five to seven (depending on the item) strategies each class period. To better guide the responses, we discussed clarifying the term "frequently." I added the phrase "Consider the average day-to-day in your classroom" to all three items.

Section six consists of two items related to vocal health and wellness. In each item prompt, I changed the verb "rate" to "rank" as suggested by an interviewee. Survey respondents prioritized pedagogical choices and therefore could only choose the highest level of prioritization once. These items consisted of adaptations (Daugherty et al. 2011; Grady & Brunken, 2022;) that cross-examined vocal health issues with specific vocal health pedagogical choices. I eliminated the issue of "decreased vocal range" after two of the three choral educator interviewees agreed that it caused them to think more about vocal training rather than vocal health maintenance. I also added the term "conditioning" to pedagogical choices after one interviewee remarked that many educators not only "warm-up," but "warm-down" their choirs.

In section seven I also asked survey respondents to rank responses, in this case related to vocal tone choices. I again changed the verb "rate" to "rank" to better reflect the process of prioritization. I also added the clarifier "artist intent" to one response option because one choral educator interviewee remarked that when teaching popular music, they often considered the original artists' interpretation over popular style or popular music as a genre.

Section eight consisted of prompts and questions that gauged educator comfortability with issues of vocal health, and programming/teaching unfamiliar music. Based upon interviewee responses, I added three questions to this section. I did not originally include a question that directly asked whether educators used outside culture bearers. Similarly, two educator participants noted their use of students as culture bearers. I added two questions that asked whether teachers collaborated with outside culture bearers, and whether teachers collaborated with students as culture bearers. The third added question offered survey respondents the opportunity to select strategies they consider important when teaching unfamiliar repertoire. One of the survey-expert participants remarked the inherent biases in this section that might lead respondents to the conclusion that best practices included collaborating with a culture bearer. They admitted the difficulty in asking questions about a subject without underscoring its seeming importance. By adding this third question, I attempted to mitigate issues of bias and leading of respondents.

The nineth, and final, section included two short response questions. All five interviewees agreed upon the revised, open-ended language of the first question. Originally the language asked specifically about barriers to collaborating with culture bearers. I changed it to "hesitations in teaching musical traditions outside of the ones you were raised in or learned about in school." The final question existed for the piloting phase only and allowed for feedback on questionnaire design and content. Initially the question prompted general feedback. One interviewee suggested I clarify the question by adding "design and content."

Overall Validity

Throughout each cognitive interview, I periodically asked about issues of bias, leading and misleading language, and fairness of questions (Desimone & Le Floch, 2004; Stone, 1993). I wanted to know how interviewees felt and how they imagined future respondents might feel taking the survey; whether respondents might feel pressured to give socially acceptable responses over honest ones (Desimone & Le Floch, 2004). Regarding the five non-demographic sections of the questionnaire, four out of five participants felt the items did not contain biased, leading, or unfair aspects. One participant helped me work through the inherent bias regarding collaborating with culture bearers in the eighth section. The three choral educators all positively noted the thought-provoking, reflective nature of the questions and the perceived usefulness of their potential results. Additionally, they shared a sentiment that individual survey takers may, because of the experience, possibly reevaluate their pedagogical practices. Although changing pedagogical habits falls outside the aims of this validation study, this feedback suggests potential implications for a larger-scale utilization.

Piloting Results

All participants ($N = 9$) completed the revised questionnaire. One participant did not answer a question related to vocal health and wellness. They did not offer a reason as part of their comments. A final short answer question solicited feedback on the content and construction of the questionnaire. One respondent commented erroneously, confusing one set of instructions for another. One respondent shared their positive experience taking the survey. All others (7/9) chose not to respond. Due to the poor response rate, I eliminated this question from the final edition of the questionnaire.

Results from the piloting phase came from a sample too small to represent choral music educators at-large. Briefly, these individuals ($N = 9$) provided the following data. When employing specific strategies to teach vocal techniques related to breathing, phonation, and resonance, they most frequently employed kinesthetic prompts over imagery, emotional, or voice science-based prompts. As required knowledge in voice science increased, pedagogical frequency of use decreased. In terms of vocal health, the piloting educators ranked teaching about hydration, vocal/physical conditioning, and sleep/rest as most important. In addition, they prioritized addressing vocal strain above other potential indicators of poor vocal health. These educators felt comfortable overall addressing issues of vocal health when it came to mild and temporary vocal and non-vocal concerns.

I asked participants to prioritize aspects of vocal timbre related to specific types of music by ranking pedagogical choices that impact choral tone. When teaching Western Classical repertoire, respondents prioritized building a choral tone and then making timbrel adjustments based upon the character of the piece. When teaching familiar, non-Classical

repertoire, participants prioritized making timbrel adjustments based upon the character of the piece and then based upon the style/genre/artist intent. When teaching unfamiliar, non-Classical repertoire, participants prioritized bringing in a style expert/culture bearer and making timbrel adjustments based upon the character of the piece. These educators felt decreasing comfortability addressing tonal adjustments as the familiarity of repertoire decreased. They cited time/training and authenticity/respect as their greatest hesitations towards teaching unfamiliar music.

When asked about collaborating with culture bearers, the piloting educators reported high comfortability. This comfortability decreased, however, when asked about reinforcing tonal choices taught by the culture bearer and fell again when asked if they would program another piece from the bearer's culture without help. More than half (66.7%) of piloting educators reported collaborating with either an outside or student culture bearer.

Discussion and Final Questionnaire Revisions

The piloting phases yielded optimistic results in terms of validity and reliability. The piloting educators' responses looked akin to the variation found in the three choral educator interviewees. This overall concurrence of responses echoed Messick's call for high content relevance to the subject domain (1989). The first through sixth sections yielded similarly varied responses. While response variation continued successfully in the seventh section, I realized that in the interest of cleaner data collection, I should better align the response choices. Specifically, each item should contain five choices. Therefore, "bringing in a culture bearer or style expert" option now appears in each item. Additionally, each item's choices should align. Specifically, the second option now always contains the terms "culture/language," and the third option now always includes "style/genre/time period/artist intent."

The first two items in the eighth section yielded conflicting and unclear results. The three choral educator interviewees answered similarly to the piloting respondents. They all rated more comfortability in addressing vocal production related issues over mild and temporary non-production issues such as a cold, allergies, or fatigue. This conflicted with self-reporting of both interviewees and pilot respondents that they prioritized teaching strategies for mitigating non-production related vocal issues (sleep/rest, hydration) and deprioritized teaching anatomy and vocal function as a health strategy. In the interviews, all three choral educators immediately assumed acute vocal health issues that would require direct medical attention. The words "mild" and "temporary" were bolded, and clarifying examples were added to the second item to curb this reaction. I suspect, however, a similar "knee-jerk" response occurred in the pilot group as in the interviews. Ambiguous results may present a limitation to the validity of the responses to this one item, perhaps failing Stone's requirement for either intelligibility, non-bias, or unambiguity (1993). The remainder of the items in this section, as well as section 9, yielded consistently varied responses as anticipated. In the final iteration of the survey, I replaced the final question with one that solicits further

participation in virtual focus groups.

Limitations and Conclusion

The primary limitation of this study centered on the reliability and expertise of the participants as well my own comprehension of the related research. As suggested by Stone (1993), conducting a piloting phase checks for item intelligibility, unambiguity, unbiases, and competency—the ability to handle many possible response types. Following these suggestions resulted in a finalized questionnaire presented in Appendix B. Other limitations of this study included the relatively small sample size and its relationship to generalizability. Additionally, while I endeavored to design a survey that yielded more specificity than prior research, the breadth and subsequent length of the survey content excluded some opportunities for deeper probing. Finally, cognitive interviewees brought their own subjectivities, and their responses could not guarantee a perfectly valid and reliable survey instrument. Results of this preliminary study, however, should ameliorate limitations in the large-scale implementation of the questionnaire to a broader population of choral educators.

The pedagogical strategies of choral educators as they pertain to teaching multiple vocal timbres, maintaining vocal health, and engaging with culture bearers is a complex and multi-faceted phenomenon. Unlike most instruments, the voice primarily exists internally and "hidden," from the musician. Involuntary muscles and the autonomic nervous system largely regulate its use (McCoy, 2012; van Mersbergen, 2014). As such, vocal teachers must rely, to differing degrees, upon myriad scientific, anecdotal, and experiential information to teach singing (McCoy, 2012). Due to the wide range of vocal educator experiences, many varied, and sometimes conflicting, approaches to singing emerge. While a qualitative study about this phenomenon might reveal rich descriptions of specific settings, a quantitative approach may uncover broad trends, gaps, and pathways for more detailed future investigations. By validating and piloting this choral educator questionnaire on vocal pedagogy, I will better collect reliable, consistent, and comparative results that will inform both the field and its future researchers.

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Appendix A: Cognitive Interview Protocol

Thank you for agreeing to meet with me today and for helping me validate a questionnaire. This interview will be audio recorded both here on Zoom and through the voice memos application on my phone. Please know that you are welcome to discontinue this interview at any time and that this interview dialogue, as well as your personal information, will be kept confidential. If mentioned in any written or presented materials, I will refer to you as an interviewee or participant, not by any personally identifying information. This is to both safeguard your confidentiality and to allow you to speak freely and honestly. We will engage in what's called a "cognitive" or "think-aloud" interview. The "think-aloud interview" is one in which respondents talk through their thought process as they answer questions on a survey. Respondents are encouraged to engage in a running commentary of everything that occurs to them as they are working through an item—what is a clear and accurate reflection of their experience, what is ambiguous or awkward, and what is absent from the item. After completing an item, respondents may be probed further by the interviewer.

Example Questions from the interviewer:

a. Where you able to comprehend "x" statement/question?

b. When you said, "x," what did you mean?

c. Could you elaborate further on "x" response?

d. Could you describe your reaction to "x" statement/question?

e. Do you feel "x" statement/question read fairly and professionally?

f. Could you provide some feedback on "x" aspect of the questionnaire?

g. After completing the questionnaire, what (if anything) would you change/add/omit?

Appendix B: Final, Revised Questionnaire

Section 1: Welcome and Overview

Thank you for your participation in this study of choral directors' experiences with issues of vocal timbre, style, pedagogy, and health. By filling out this questionnaire, you are advancing research that investigates the intersection of vocal pedagogy and choral pedagogy practices. There are nine sections. Please take your time responding to each portion of the questionnaire.

Section 2: Demographic Information – Schooling & Training

Instructions: In this section we ask that you provide basic demographic information related to your professional and academic experience as related to vocal pedagogy.

Item 1: What is your highest completed level of education?

> Undergraduate or Associate Degree, Masters Level Degree, Doctoral Level Degree, Alternative or non-degree certification, Other

Item 2: Have you taken any courses related to the areas of study listed below? Please select all that apply.

> Vocal Pedagogy (including anatomy, physiology, voice science); Diction (including the International Phonetic Alphabet); Acoustics or Physics of Sound; Other

Item 3: In what settings did you take this or these course(s)? Please select all options that apply.

> Required as an undergraduate; Elected as an undergraduate; Required as a graduate student; Elected as a graduate student; In a workshop, conference, or continuing education; Only in a workshop, conference, or continuing education

Section 3: Demographic Information – Institutional Information

Instructions: In this section, we ask you to provide basic demographic information related to your place of work.

Item 4: Type of Institution. Please check all that apply.

Middle School, High School or Secondary School, College or University, Other

Item 5: Choral Program Size. Enter a number (approximation is okay). If you teach at more than one institution, please select the largest program size.

Item 6: Program Diversity (which may differ from your school overall)

Almost exclusively White or Caucasian, majority White or Caucasian, majority Non-White, almost exclusively Non-White

Item 7: How would you describe the average socio-economic status of the students in your choral program?

High socio-economic status on average, medium socio-economic status on average, low socio-economic status on average

Section 4: Demographic Information – Professional Practice

Instructions: In this section, we ask you to provide basic demographic information related to your professional practice.

Item 8: How many years of teaching experience do you have?

1 or fewer, 2 to 5 years, 6 to 10 years, 11 to 20 years, 21 or more years

Item 9: Are you involved with teaching a musical, or musical theater style class as part of your employment?

Yes, no, other

Item 10: Do you coach or advise a student led a capella group, or other "non-traditional" vocal activities as part of your employment?

Yes, no, other

Item 11: Please list any choral pedagogy/vocal pedagogy/teaching textbooks you may currently use (Title, Author). Write N/A if this does not apply.

Section 5: Vocal Pedagogy Choices

Instructions: In this section we ask you to consider how frequently you make certain pedagogic choices as related to the voice.

Item 12: When teaching about breath for singing, how frequently do you employ the choices below? Consider that average day-to-day in your program.

> Frequency: Never, rarely, sometimes, often, most of the time
>
> Choices: Imagery; emotional language; kinesthetic prompts; teaching how the lungs and diaphragm work; teaching how to manipulate abdominal, or other voluntary muscles for breathing.

Item 13: When teaching about phonation for singing, how frequently do you employ the choices below? Consider that average day-to-day in your program.

> Frequency: Never, rarely, sometimes, often, most of the time
>
> Choices: Imagery, emotional language, kinesthetic prompts, teaching about the vocal folds and their function, teaching about other laryngeal structures and their function

Item 14: When teaching about resonance for singing, how frequently do you employ the choices below? Consider that average day-to-day in your program.

> Frequency: Never, rarely, sometimes, often, most of the time
>
> Choices: Imagery, emotional language, kinesthetic prompts, teaching about the soft palate, teaching about the jaw or lips, teaching about the tongue placement, teaching about other pharyngeal and laryngeal structures, teaching about vocal formants and frequencies

Section 6: Vocal Health and Wellness

Instructions: In this section we ask that you rank the importance of certain pedagogical decisions about vocal health and wellness. Consider your daily or weekly teaching practices, not specific or severe situations. While you may feel that certain options carry equal importance, we ask you to carefully consider each and prioritize accordingly.

Item 15: When teaching basic vocal health and wellness with your students, which of the below factors do you prioritize? Please rank each factor using 5 as the most prioritized, and 1 as the least prioritized.

> Hydration, sleep or rest, drug and alcohol use, vocal or physical warmups or conditioning, knowledge about vocal anatomy or function

Item 16: When mitigating issues of vocal health and wellness with your students, which of the below issues do you prioritize? Please rank each factor using 5 as the most prioritized,

and 1 as the least prioritized.

> Throat clearing, breathy sound, vocal strain, vocal fatigue, hoarseness or throat pain.

Section 7: Vocal Tone Choices

Instructions: In this section we ask you to consider pedagogical choices when it comes to vocal tone. While you may feel that certain options carry equal importance, we ask you to carefully consider and prioritize accordingly.

Item 17: When teaching and performing traditional choral repertoire (Western Classical) what tonal or timbrel choices do you enact? Rank 5 as your most important and 1 as your least important.

> Building or maintaining a choral tone; making timbrel adjustments based upon language; making timbrel adjustments based upon time period, style, genre, or artist intent; making timbrel adjustments based upon the character of the piece; bringing in a style expert or culture bearer

Item 18: When teaching and performing non-Classical repertoire of a familiar culture, style, or genre (Broadway, Jazz, pop, show choir, country, spirituals, American folksong etc.) what tonal or timbrel choices do you enact? Rank 5 as your most important and 1 as your least important.

> Building or maintaining a choral tone; making timbrel adjustments based upon language; making timbrel adjustments based upon time period, style, genre, or artist intent; making timbrel adjustments based upon the character of the piece; bringing in a style expert or culture bearer

Item 19: When teaching and performing non-Classical repertoire from unfamiliar cultures, languages, styles, or genres, what tonal or timbrel choices do you enact? Rank 5 as your most important and 1 as your least important.

> Building or maintaining a choral tone; making timbrel adjustments based upon language; making timbrel adjustments based upon time period, style, genre, or artist intent; making timbrel adjustments based upon the character of the piece; bringing in a style expert or culture bearer

Section 8: Comfortability

Instructions: In this section we ask you to rate your comfortability with various teaching scenarios that relate to vocal health, and timbrel or tonal issues related to style, genre, or culture.

Item 20: A singer in your class presents with a mild vocal health issue that is obviously related to their vocal habits. How comfortable do you feel helping them manage their vocal health during this time.

5-point rating scale with anchors not comfortable at all and very comfortable

Item 21: A singer in your class develops a mild and temporary vocal health issue that does not stem from their vocal habits. How comfortable do you feel helping them manage their vocal health during this time? They may have a cold, be tired, be experiencing allergies, slightly hoarse or breathy etc.

5-point rating scale with anchors not comfortable at all and very comfortable

Item 22: You've programmed a choral arrangement of a famous pop or Broadway tune for your choir, show choir, or a cappella group. How comfortable do you feel in your ability to help them sound more like the original style?

5-point rating scale with anchors not comfortable at all and very comfortable

Item 23: You would like to program a piece in an unfamiliar foreign language or from a non-Classical tradition. How comfortable do you feel in your ability to help them sound like the musical traditions outside of the USA?

5-point rating scale with anchors not comfortable at all and very comfortable

Item 24: You are preparing to teach a piece in an unfamiliar language or from a non-Classical tradition. Which of the following strategies would you feel are most important? Please check all that apply.

Listen to recordings by the publisher or online, use pronunciation guides from the publisher or online, consult with your students who speak that language or are of that tradition, rely upon an expert or culture bearer, other

Item 25: You have access to at least one expert or culture bearer of the musical tradition you're unfamiliar with. How comfortable do you feel bringing them in to lead the teaching of this musical tradition?

5-point rating scale with anchors not comfortable at all and very comfortable

Item 26: The expert or culture bearer you've brought in asks that your students make tonal or timbrel choices that are noticeably different from the ones you've taught or know how to teach. How comfortable are you with incorporating or reinforcing those choices?

5-point rating scale with anchors not comfortable at all and very comfortable

Item 27: After successfully working with your expert or culture bearer how comfortable do you feel programming another piece from that musical tradition without bringing the individual (or another expert or culture bearer) back again as leader or collaborator?

5-point rating scale with anchors not comfortable at all and very comfortable

Item 28: Have you collaborated (in person or virtually) with an outside style expert or culture bearer in selecting or teaching music?

Yes, No

Item 29: Have you collaborated with a student in your class as a style expert or culture bearer in selecting or teaching music?

Yes, No

Section 9: Short Response

Instructions: Please answer each prompt briefly

Item 30: Do you feel any hesitations in teaching musical traditions outside of the ones you were raised in or learned about in school? If so, would you please describe these hesitations.

If not, please write N/A.

Item 31: If you would like to participate in an online focus group related to this study, please list your preferred email contact. Note that by supplying your email address, it may be possible to connect your survey answers with your contact information.

Article

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Music Teachers' Perceptions of Nonverbal Conducting Technique Items in Teaching Choir in the Classroom

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Abstract

The purpose of this descriptive study was to examine music teachers' perceptions of nonverbal conducting technique items based on their classroom choral teaching experiences. One hundred and fifty classroom choral music educators (N = 150) participated in this study. I employed two procedures. First, using a seven-point Likert-type scale, participants rated 15 nonverbal conducting technique items in their importance to directing choral ensembles. I then arranged participants' mean ratings of the 15 items in order of importance. The three most participant-rated important items were providing right-hand indications for tempo changes, providing left-hand indications for crescendos and diminuendos, and providing right-hand indications for attacks and releases. Then, participants selected their three most important nonverbal conducting technique items using the same 15 items. There was a tie for the rank of the third most important item, resulting in four items as most important. The four most participant-selected important items were providing right-hand indications for tempo changes, providing facial/body indications for style emphases and changes (legato, staccato, etc.), providing left-hand indications for crescendos and diminuendos, and providing left-hand indications for attacks and releases. The choir teachers' responses gathered in this study can be beneficial in understanding which specific conducting technique components are viewed as important when developing successful conducting techniques to be used in choral classroom teaching.

Keywords: choral, conducting technique, preservice music teachers, classroom music teachers, music teacher preparation

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Music Teachers' Perceptions of Nonverbal Conducting Technique Items in Teaching Choir in the Classroom

Music teachers should possess effective conducting techniques and various instructional skills to lead ensembles in the classroom (Silvey & Major, 2014). Steele (2010) specified that the three crucial characteristics successful classroom music teachers reflect are leadership, self-efficacy, and nonverbal communication. Among these three important characteristics, the development of nonverbal communication skills is foundational in becoming a successful music teacher and ensemble conductor (Wöllner, 2008). Thus, developing nonverbal conducting communication skills is an overarching part of music teachers' ensemble rehearsals and performance preparations (Silvey & Major, 2014).

Two Majors Components of Nonverbal Conducting Communication

Clear and expressive use of nonverbal communication skills aid both conductors and ensembles to enrich their musical and artistic experiences (Silvey & Major, 2014). There are various conducting components that should involve effective unspoken interactions between a conductor and ensemble (Price & Winter, 1991). The two major components of nonverbal conducting communication that Morrison and Selvey (2014) identified are the use of hand and body gestures and facial expressions. These two nonverbal conducting communication elements are critical to convey conductors' wishes in the classroom ensemble setting (Ford, 2001; Fredrickson et al., 1998; Skadsem, 1997).

Gestures as Nonverbal Conducting Communication

To be an effective conductor, appropriate musical choices must be made to support their nonverbal conducting communication (Nápoles & Silvey, 2017). After becoming familiar with a score, the conductor must decide which specific gestures to utilize prior to meeting an ensemble; proper gestural selection is imperative during this decision-making processes (Lane, 2006). Specifically, conductors should consider clarity and expressivity when determining which gestures should be used to effectively communicate with their ensembles (Nápoles & Silvey, 2017). According to Nápoles and Silvey (2017), the effective use of right-and-left hand gestural skills enhances conductors' expressivity and clarity when communicating with their ensembles.

Facial Expressions as Nonverbal Conducting Communication

A conductor's use of facial expressions is essential to convey nonverbal ensemble directives (Manfredo, 2008; Nápoles et al., 2021; Romines, 2003). Research supports the use of facial expressions to reinforce effective nonverbal communication between conductors and ensemble members. Van Weelden (2002) found that conducting effectiveness and facial expressions were highly correlated. Byo and Austin (1994) indicated that expert conductors used varied facial expressions more frequently than novice conductors. Nápoles et al. (2021)

reported that participants preferred working with conductors who appropriately used facial expressions.

When conductors use contrasting facial expressions, they convey approval, disapproval, or neutrality (Nápoles et al., 2021; Yarbrough, 1975). In vocal settings, vocalists' facial expressions convey emotions of a sung phrase (Livingstone et al., 2009) and include smiles, grimaces, open mouth gestures, pursed lips, raised eyebrows, and a tilted head (Byo & Austin, 1994). Similarly, eye contact with the conductor becomes an indispensable element in communicating with ensemble members (Byo, 2001). Yarbrough and Price (1981) found that conductors' eye contact positively impacts the on-task behavior of high school students, which is an indicator of attentiveness and engagement.

Teaching Nonverbal Conducting Techniques in Conducting Classes

Johnson et al. (2003) reported that ensemble members preferred working with conductors who communicated by using clear and effective nonverbal hand and body gestures and expressive facial expressions. In undergraduate conducting class settings, instructors encourage their students to use nonverbal communication techniques such as body movement (Byo & Austin, 1994) and facial expression (Wöllner, 2008) including eye contact (Price & Winter, 1991). Typically, in conducting classes, instructors guide students' nonverbal communication use in endeavors such as conveying tempo, styles, dynamics, and articulation (Nápoles et al., 2014), guiding speed of movement (Luck et al., 2010), and indicating left and right arm movement and independence (Byo & Austin, 1994). Instructors also encourage the use of nonverbal communication such as facial expression (Wöllner, 2008), body movement (Byo & Austin, 1994), and eye contact (Price & Winter, 1991). Techniques of nonverbal conducting communication are frequently taught in undergraduate conducting courses, so students can eventually clearly and expressively rehearse and perform with their ensembles (Green, 2004; Morrison et al., 2009; Morrison & Selvey, 2014). When conductors effectively use nonverbal communication conducting techniques, they not only augment their ability to communicate with ensemble members, but also enhance their status and effectiveness as teachers.

Conducting and Teaching Effectiveness

When and how often performers look at a conductor can be associated with a conductor's proficiency in leading an ensemble and the ensemble members' ability to understand the nonverbal direction of the conductor (Byo, 2001). Steele (2010) noted the importance of nonverbal communication in the classroom and its relation to teaching effectiveness. Music education researchers have articulated the importance of conducting effectiveness and expressivity in working with ensembles and stressed the importance of teaching such skills in conducting classes (Byo & Austin, 1994; Johnson et al., 2003; Goolsby, 1999; Price & Winter, 1991; VanWeelden, 2002; Yarbrough, 1975).

Need for this Study

Generally, preservice music teachers in the United States choose to enter their music teacher preparation program to acquire pedagogical skills in a specific area such as choir, band, orchestra, and/or elementary general music. As part of music teacher preparation, the acquisition of nonverbal conducting techniques is important to effectively conduct classroom ensembles. Conductors' nonverbal communication ability synchronized with ensemble performance clarity and expressivity is important (Pasquale, 2008). Johnson et al. (2003) reported that ensemble members preferred working with conductors who communicated by using clear and effective nonverbal hand and body gestures. Both collegiate musicians and secondary school ensemble students indicated their preference for working with conductors who showed conducting gestural clarity, technical fluency, and increased musical expressivity rather than those whose conducting seemed mechanical, unclear, and lacked expressiveness (Nápoles et al., 2021; Price & Winter, 1991; Silvey & Koerner, 2016). Hence, conducting pedagogues strive to teach vital conducting skills to preservice music teachers that enhance nonverbal communication effectiveness with ensemble (Nápoles et al., 2014).

Scholars have found that conducting course instructors present diverse curricular practices and instructional perspectives (Silvey et al., 2020) pertaining to the timing and sequencing of introducing certain conducting components (Manfredo, 2008; Romines, 2003; Silvey, 2013). Considering related research findings on the importance of conductors' effective gestural language and facial expressions, it would be pertinent to examine how music teachers prioritize various components of nonverbal communication when conducting their ensembles. For the purpose of this study, the word, importance, refers to a skill of significance or value. Therefore, the purpose of this study was to examine which nonverbal conducting technique items music teachers perceived to be the most and least important when they conducted their classroom choral ensembles. The following research questions guided my study:

1. What were classroom choir teachers' importance ratings of nonverbal conducting technique items?

2. What were the three nonverbal conducting technique items that participants identified as most important in conducting choir in the classroom?

3. What were the three nonverbal conducting technique items that participants identified as least important in conducting choir in the classroom?

Method

Participants

Participants in this study (N = 150) were music educators who taught choir in K-12

school settings. I recruited former and current choir teacher participants through the Facebook Pages of I'm a Choir Director, Music Teachers, Middle School Choir, and I Teach High School Chorus for approximately three months in the summer of 2022. To obtain my final pool of 150 participants, I sent an initial survey invitation and three follow-up survey invitations. In order to establish a pool of qualified participants for the study, the following was the first survey question: Do you teach, or have you taught choir in the K-12 classroom? Only those individuals who stated they possessed classroom choral teaching experience qualified for this study and I retained their surveys for further study analyses. All the 150 participants were practicing K-12 choral music teachers. None of the participants submitted partial survey responses. Of those individuals responding, participation was voluntary. I did not offer incentives to participants. I informed the participants that the data were anonymous.

Survey Instrument

I designed a survey to examine choir teachers' perceptions of important nonverbal conducting technique items by requesting music teachers' input based on their choral teaching experiences in the classroom. In addition to constructing seven survey questions which appear below under the head Survey Pilot Study, I listed 15 choral conducting items that were frequently presented and discussed topics in choral methods and conducting courses. To gather the 15 nonverbal conducting technique items, I reviewed conducting technique related literature (e.g., Byo & Austin, 1994; Morrison et al., 2009; Nápoles et al., 2021; Silvey & Major, 2014; Wöllner, 2008). I finalized 15 nonverbal items for the survey influenced by this literature and listed the following 15 nonverbal conducting technique items in the survey instrument, which is reported in Table 1 on the next page.

Survey Pilot Study

In order to construct the survey instrument, I had originally gathered 12 conducting items. I recruited 16 choral music educators who had K-12 choir teaching experiences to review these 12 items. These pilot study participants had between 1 to 25 years of choral teaching experience. Pilot study participants reviewed 12 nonverbal conducting technique items for clarity, understandability, and proper survey question wording. Participants were also directed to rate the importance of the 12 items using a seven-point Likert scale (1 = *not very important* to 7 = *very important*).

Final Survey Questionnaire

After reviewing the pilot study, I decided to revise the instrument prior to confirming the final survey by adding three items relating to tempo indications: providing right hand for tempo changes, providing left hand for tempo changes, and providing facial/body expressions for tempo changes. As a result, the final survey instrument included 15 nonverbal

Table 1.
15 Nonverbal Conducting Technique Items

15 Nonverbal Conducting Technique Items
Right-hand indications for crescendos and diminuendos
Right-hand indications for *ppp, pp, p, mp, mf, f, ff,* & *fff* cueing
Right-hand indications for style emphases and changes (legato, staccato, etc.)
Right-hand indications for attacks and releases
Right-hand indications for tempo changes
Left-hand indications for crescendos and diminuendos
Left-hand indications for *ppp, pp, p, mp, mf, f, ff,* & *fff* cueing
Left-hand indications for style emphases and changes (legato, staccato, etc.)
Left-hand indications for attacks and releases
Left-hand indications for tempo changes
Facial/body indications for crescendos and diminuendos
Facial/body indications for *ppp, pp, p, mp, mf, f, ff,* & *fff* cueing
Facial/body indications for style emphases and changes (legato, staccato, etc.)
Facial/body indications for attacks and release
Facial/body indications for tempo changes

conducting items. The overall pilot study was helpful in revising the survey items, eliminating typos and errors, increasing the clarity and understandability of the measure prior to finalizing and distributing the survey.

My pilot study participants reviewed the entire questionnaire for validity of the choral score preparation items. The content validity index (CVI), which provides an overall assessment of the measurement instrument, was 0.9 indicating that more than half of the experts agreed: values ranging from -1 (perfect disagreement) to +1 (perfect agreement). I removed errors in the pilot which increased the understandability of the measure prior to finalizing and distributing the survey.

The survey consisted of seven questions that I requested each participant to complete. In the first section of the survey, questions one to four, I asked participants to complete the four open-ended questions and/or click appropriate items in questions regarding their teaching background.

1. Do you teach, or have you taught choir in the K-12 classroom?

2. How many years have you taught music?

3. How many years have you taught choir?

4. Did you teach/have you taught choir as a primary, or secondary teaching area?

(Note: Primary means participants' main teaching area and secondary means participants non-main teaching area.)

In the second section of the survey, on question five, I asked participants to rate each of 15 nonverbal conducting technique items using seven-point Likert-type scales (1 = *not very important* to 7 = *very important*).

5. How important do you think it is that choral teachers, working with K-12 groups, perform the following? Please rate the level of the following items in their importance to choral conducting by clicking the appropriate box (1 = *Not Very Important* to 7 = *Very Important*).

In the third section of the survey, questions six and seven, I requested that participants select the three most and least important nonverbal conducting technique items.

6. Please select, by clicking the appropriate box, the 3 conducting items that you perceive most important when you conduct K-12 choral groups.

7. Please select, by clicking the appropriate box, the 3 conducting items that you perceive least important when you conduct K-12 choral groups.

Reliability

To compute survey reliability and assess the internal consistency of my questionnaire (Groves, 2009; Rawlings, 2015) I calculated a coefficient of reliability using Cronbach's Alpha and the SPSS statistical software program version 24. The value of Cronbach's Alpha for the survey was $\alpha = .860$. Values of Cronbach's Alpha internal consistency $0.8 \leq \alpha < 0.9$ are usually interpreted as fine. Therefore, the internal consistency of the 150 participants' responses on my survey, across the 19 choral score preparation items on a multiple-item measure, can be considered acceptable (Pyrezak, 2018).

Data Collection

I received my university's Institutional Review Board (IRB) approval to distribute survey

invitations. I used Google Forms to administer the online survey and collect data responses. The choir teacher participants ($N = 150$) received a hyperlink to an online survey invitation on the specific Facebook pages on which they were members. Participants read my institutions' IRB statement in the survey invitation prior to looking at the first survey question; they responded to all survey questions to complete and submit the survey. I indicated that survey completion implied granting permission to use participants' data for study purposes. I downloaded survey responses from the 150 choral music educators in a spreadsheet format to use as the data for this study to compute their responses and analyze the data.

Analysis

I employed the following procedures to analyze survey responses that formed the data pool. The purpose of question one was to identify qualified participants based on their responses to this question. Responses to questions two to four related to participants' music and choral teaching background were recorded. On question five, using a seven-point Likert-type scale (1 = *not very important* to 7 = *very important*), participants rated each of the 15 nonverbal conducting technique items in their importance to conducting choir in the classroom. I then computed the mean scores and standard deviations of the participant-rated 15 nonverbal conducting items. Following this procedure, I arranged the resultant participants' 15 mean ratings in order of importance to determine the three most important participant-rated nonverbal conducting items.

Using the same 15 nonverbal conducting items, on questions six to seven, participants selected the three most and least important items they perceived important when conducting their choral ensembles. I then identified participants' selections of the three most and least important nonverbal conducting items using frequency distributions. The rationale for requesting participants to both rate and select the most and least important nonverbal conducting items using the same list was to determine whether there was commonality between the two lists. In other words, were participants' responses consistent, similar, and/or different? There was congruency between the participants-rated-and-selected items.

Participants in this study indicated their years of teaching choir in the K-12 school. Participants' teaching experience ranged from one to 45 years. Among the participants, 62 (41.3%) taught choir one to 10 years and 88 (58.7%) taught choir 11 years or more. A majority of participants indicated that they taught choir as their specialized music teaching area; 119 (79.3%) taught choir as their specialized music teaching area and 31 (20.7%) taught choir outside of their specialized music teaching area. The measures of central tendency related to years of choral teaching experience are reported in Table 2 on the next page.

Table 2.
Measures of Central Tendency Related to Years of Choral Teaching Experience

	Group 1 (One to 10 Years)	Group 2 (11 Years or More)	Primary (Choral Specialists)	Secondary (Non-Choral Specialists)
Mean	6.75	22.56	15.88	16.55
Median	5.75	22.00	16.00	15.00
Mode	1.00	15.00	1.00	12.00

Results

Participants-rated 15 Nonverbal Conducting Technique Items

I requested participants to rate each of the 15 nonverbal conducting technique items in their importance to classroom choral ensemble instruction. I refereed to these as participants-rated items. I arranged participants' mean ratings in order of importance based on the survey results. The three most important participant-rated items were (1) providing right-hand indications for tempo changes, (2) providing left-hand indications for crescendos and diminuendos, and (3) providing right-hand indications for attacks and releases. The three least important participant-rated items were (1) providing right-hand indications for crescendos and diminuendos, (2) providing right-hand indications for *ppp, pp, p, mp, mf, f, ff,* & *fff* cueing, and (3) providing left-hand indications for tempo changes. The mean ratings and standard deviations for these items are presented in Table 3.

Table 3.
Participant-rated Nonverbal Conducting Technique Items

15 Nonverbal Conducting Technique Items	Mean	SD
Right-hand indications for tempo changes	5.37	1.85
Left-hand indications for crescendos and diminuendos	5.18	1.80
Right-hand indications for attacks and releases	4.99	1.90
Right-hand indications for crescendos and diminuendos	4.98	1.81

Continued on the next page

Right-hand indications for *ppp, pp, p, mp, mf, f, ff,* & *fff* cueing	4.89	1.82
Facial/body indications for style emphases and changes (legato, staccato, etc.)	4.86	1.75
Facial/body indications for *ppp, pp, p, mp, mf, f, ff,* & *fff* cueing	4.81	1.81
Facial/body indications for crescendos and diminuendos	4.80	1.96
Left-hand indications for style emphases and changes (legato, staccato, etc.)	4.65	1.87
Left-hand indications for *ppp, pp, p, mp, mf, f, ff,* & *fff* cueing	4.62	1.92
Left-hand indications for attacks and releases	4.48	2.04
Right-hand indications for style emphases and changes (legato, staccato, etc.)	4.26	1.99
Left-hand indications for tempo changes	4.25	2.02
Right-hand indications for *ppp, pp, p, mp, mf, f, ff,* & *fff* cueing	4.96	1.90
Right-hand indications for crescendos and diminuendos	3.79	1.92

Participants-selected Three Most Important Nonverbal Conducting Technique Items

I requested participants to select three most important nonverbal conducting items that should be prioritized in conducting choir. I refer to these analyses as participants-selected items. I analyzed participants' responses, using frequency distributions. The results of this analysis are presented in Table 4 on the next page. From this frequency distribution analysis, I identified the participants' three most important nonverbal conducting technique items. There was a tie for the rank of the third most important item, resulting in four items as most important. The resultant four most important nonverbal conducting technique items in the order of the highest frequency counts were (1) providing right-hand indications for tempo changes, (2) providing facial/body indications for style emphases and changes (legato, staccato, etc.), (3) providing left-hand indications for crescendos and diminuendos, and (4) providing right-hand indications for attacks and releases.

Table 4.
Participants-selected Most Important Nonverbal Conducting Technique Items

Nonverbal Conducting Technique Items	Frequency (*n*)	Percent (%)
Right-hand indications for tempo changes	61	13.6
Facial/body indications for style emphases and changes (legato, staccato, etc.)	50	11.1
Left-hand indications for crescendos and diminuendos	48	10.7
Right-hand indications for attacks and releases	48	10.7
Right-hand indications for *ppp, pp, p, mp, mf, f, ff,* & *fff* cueing	45	10.0
Left-hand indications for style emphases and changes (legato, staccato, etc.)	33	7.3
Facial/body indications for *ppp, pp, p, mp, mf, f, ff,* & *fff* cueing	27	6.0
Facial/body indications for crescendos and diminuendos	23	5.1
Right-hand indications for style emphases and changes (legato, staccato, etc.)	21	4.7
Left-hand indications for *ppp, pp, p, mp, mf, f, ff,* & *fff* cueing	20	4.4
Left-hand indications for attacks and releases	19	4.2
Right-hand indications for style emphases and changes (legato, staccato, etc.)	18	4.0
Left-hand indications for tempo changes	17	3.8
Facial/body indications for attacks and releases	14	3.1
Facial/body indications for tempo changes	6	1.3

Participants-selected Three Least Important Nonverbal Conducting Technique Items

Each participant chose three least important nonverbal conducting technique items from the 15 survey items. I also refer to these analyses as participants-selected items. Table 5 on the next page presents the statistical results for the participants' three least important non-

Table 5.
Participants-selected Least Important Nonverbal Conducting Technique Items

Nonverbal Conducting Technique Items	Frequency (*n*)	Percent (%)
Facial/body indications for tempo changes	57	12.7
Facial/body indications for attacks and releases	52	11.6
Left-hand indications for tempo changes	46	10.2
Right-hand indications for crescendos and diminuendos	39	8.7
Right-hand indications for *ppp, pp, p, mp, mf, f, ff,* & *fff* cueing	36	8.0
Facial/body indications for style emphases and changes (legato, staccato, etc.)	35	7.8
Facial/body indications for *ppp, pp, p, mp, mf, f, ff,* & *fff* cueing	34	7.6
Facial/body indications for crescendos and diminuendos	32	7.1
Left-hand indications for style emphases and changes (legato, staccato, etc.)	28	6.2
Left-hand indications for *ppp, pp, p, mp, mf, f, ff,* & *fff* cueing	27	6.0
Left-hand indications for attacks and releases	18	4.0
Right-hand indications for style emphases and changes (legato, staccato, etc.)	16	3.6
Left-hand indications for crescendos and diminuendos	16	3.6
Right-hand indications for attacks and releases	9	2.0
Right-hand indications for tempo changes	5	1.1

verbal conducting technique item selection. The three least important items in the order of the highest frequency counts were (1) providing facial/body indications for tempo changes, (2) providing facial/body indications for attacks and releases, and (3) providing left-hand indications for tempo changes.

Discussion

The purpose of this study was to investigate which nonverbal conducting technique items choral music teachers perceived to be the most and least important when they conducted their ensembles in the classroom. I sought to determine participant rankings of the three most and least important items. The following were the findings from the research questions. The three most important participants-rated nonverbal conducting technique items were (1) providing right-hand indications for tempo changes, (2) providing left-hand indications for crescendos and diminuendos, and (3) providing right-hand indications for attacks and releases. The resultant four most important participants-selected items, due to a tie for the third rank were (1) providing right-hand indications for tempo changes, (2) providing facial/body indications for style emphases and changes (legato, staccato, etc.), (3) providing left-hand indications for crescendos and diminuendos; and providing right-hand indications for attacks and releases. The three most important participants-selected items were (1) providing right-hand indications for crescendos and diminuendos, (2) providing right-hand indications for *ppp, pp, p, mp, mf, f, ff, & fff* cueing, and (3) providing left-hand indications for tempo changes. However, the three least important participants-selected items were (1) providing facial/body indications for tempo changes, (2) providing facial/body indications for attacks and releases, and (3) providing left-hand indications for tempo changes. Commonality between participants-rated-and-selected most and least important nonverbal conducting technique findings, as detailed above, guides the discussion below.

Commonality Among the Three Most Participants-rated-and-selected Items

As stated previously, one of the reasons for requesting choral music educators to both rate-and-select items using the same list of nonverbal conducting technique items was to determine whether there was consistency among participants' responses. There was commonality between the most important items that participants rated-and selected. Three agreements between the two lists were (1) provide right-hand indications for tempo changes which was the first highest item in both lists, (2) provide left-hand indications for crescendos and diminuendos which was the second highest item that participants-rated and the third highest item that participants-selected, and (3) providing right-hand indications for attacks and releases which was the third highest item in both lists.

Providing Right-hand Indications for Tempo Changes

Classroom choir teachers in this study perceived that providing right-hand indications for tempo changes was the most important nonverbal conducting technique item when they conducted choral ensembles. It seems that participants' previous choral conducting experiences and training accounted for this item being rated-and-selected as the highest on both lists. Music teachers might have been taught in their introductory conducting classes that the right hand should be used as the main indicator for this task (Ford, 2001; Silvey &

Fisher, 2015).

Providing Left-hand Indications for Crescendos and Diminuendos

Choral practitioner participants considered providing left-hand indications for crescendos and diminuendos as another most important nonverbal conducting technique item in teaching choir in the classroom. Pasquale (2008) found that undergraduate choral conducting course instructors taught the skill of expressing dynamics, such as using left-hand indications for crescendos and decrescendos. In a study by Morrison et al. (2009), when similar excerpts were given to a group of conductors, more expressive conductors demonstrated dynamic differences more effectively providing left-hand indications and received higher performance ratings from their ensembles than less expressive conductors. Classroom choir teachers in this study also prioritized the ability of providing left-hand indications for crescendos and decrescendos based on their choral ensemble teaching experiences. Participants, from their choral teaching as well as their undergraduate conducting course experiences, might have been trained in these situations to use the left-hand for indicating crescendo and crescendo rather than using right hand indications.

Providing Right-hand Indications for Attacks and Releases

Participants perceived that providing right-hand indications for attacks and releases as one of the most required nonverbal conducting techniques when they rehearsed and performed with their choirs. Participants might have found that providing right-hand indications for attacks and releases was useful when they taught choir in the classroom and could have used right-hand indications for this task. Given the ranking of this item, it is suggested that choir teachers may wish to consider prioritizing providing right-hand indications for attacks and releases when conducting (Whitaker, 2011; Yarbrough, 1987).

Commonality Between the Three Least Useful Participants-rated-selected Items

There was commonality in the three least important participants-rated-and-selected items, that being the use of left-hand indications for tempo changes. Participants-rated left-hand indications for tempo changes as the one of the least important nonverbal choral conducting technique items. While participants may actually use left-hand indications for tempo changes in their conducting, they indicated that they were less important than the other conducting technique items.

Implications for and Applications to the Profession

I have several suggestions for conductor teacher educators based on the findings in this study. Respondents rated-and-selected providing right-hand indications for tempo changes as the most important nonverbal conducting technique item. This finding reflects a need to prepare preservice music teachers' clear tempo changes by providing right-hand indica-

tions as an expected gestural technique when conducting. It is recommended that exploring a collection of middle and high school choral literature that particularly involves frequent tempo changes and utilizes such repertoire as a means to enhance preservice music teachers' right-hand tempo change indication skill be employed in undergraduate choral conducting training. Silvey et al. (2020) stated that to refine preservice music teachers conducting technique, the use of nonverbal communication must be emphasized, which would reinforce the development of right-hand technique used for tempo changes especially when that conducting literature involves multiple tempo changes.

Participants also considered the use of the left-hand to indicate crescendos and diminuendos as one of the most important items in classroom choir conducting. The concept of left-hand independence becomes an important factor in this endeavor (Skadsem, 1997). Participants in Price and Chang's studies (2001, 2005) highlighted the value of left-hand expressivity in their overall ratings of conductors. However, Silvey (2013) reported that novice conductors' left-hand independence and expressive gestures were not developed properly during their conducting and/or music teacher preparation programs. As suggested by Green (2004), both hands should become equally skilled and independent, and more emphasis should be given to the development of left-hand independence in teacher preparation conducting programs. In choral conducting coursework, more opportunities should be offered preservice music teachers to strengthen left-hand gesturing of crescendos and diminuendos using various excerpts in front of lab ensembles (Livingstone et al., 2009).

Providing facial/body indications for style emphases and changes (legato, staccato, etc.) was the second most participants-selected item. Silvey (2013) found that the absence of conductors' facial expression in high school ensemble settings negatively affected ensemble expressivity. Participants in Wöllner's (2008) study rated conductor expressivity higher when they used facial expression. The participants' indication of providing facial/body indications for style emphases and changes as an important nonverbal conducting item in this study supports Yarbrough's (1975) findings that high school ensemble students perceived their conductors varied facial expressions as an effective means to engage them in the musical dialogue of a work. For singers, the use of facial expression is an effective means to convey the emotion and story of musical selections (Livingstone et al., 2009). It is suggested that choral music teachers practice utilizing facial expressions to increase their conducting expressivity in choral ensemble settings.

Undergraduate conducting course instructors should encourage preservice music teachers to conduct using expressive gestures, eye contact, facial expressions, and body movement (Price & Winter, 2001). Acquiring a host of nonverbal skills such as the 15 nonverbal conducting technique items reviewed in this study could assist individuals in developing clear and expressive conducting technique. The task of developing these skills could be accomplished in private or small group conducting sessions. In such sessions, conducting instructors could use information from this study in the development of specific nonverbal conducting technique components. For preservice music teachers, knowing which items

classroom choir teachers tend to think as the most important conducting skill can be helpful in developing their own conducting skills.

It is important that undergraduate choral conducting instructors, who prepare preservice choir teachers, continue to broaden their students' conducting skills by improving their nonverbal conducting communication skills to communicate more effectively with their ensembles. The art of conducting requires both highly developed knowledge and physical skills (Price & Winter, 1991). Most preservice music teachers typically begin to learn and develop the conducting skills necessary to teach classroom ensembles during their undergraduate conducting courses (Silvey et al., 2020). However, many music teachers wished they had been offered or procured additional conducting experiences in their undergraduate conducting program; especially conducting experiences that were similar to real classroom settings (Silvey et al., 2020) as well as actual conducting experiences (Silvey, 2011b).

Many music teacher preparation programs offer two conducting courses as required coursework (Hart, 2019; Manfredo, 2008; Silvey, 2013). Conducting instruction is also taught in choral methods courses. Often conducting and choral methods courses are not taught by the same individuals as many universities tend to assign choral methods courses to music teacher educators and conducting courses to conducting faculty members. Conducting courses tend to focus on teaching conducting technique to music students, regardless of their majors, while choral methods courses tend to focus on the preparedness of preservice music teachers for the choral classroom. However, the commonality between conducting and choral methods courses is evident in that both are preparing music education majors for future teaching/conducting experiences. Therefore, the results of this study would be beneficial for both conducting and choral methods instructors. I recommend that instructors in both settings focus on enhancing students' nonverbal conducting communication techniques in actual classroom or microteaching settings.

Recommendations for Future Research

I explored classroom choir teachers' importance ratings of 15 nonverbal conducting technique items. Using the survey in this study, future research comparing the response of novice and expert choir teachers would be useful to determine whether any differences exist between more and less experienced instrumental specialists in their nonverbal classroom choral conducting priorities. Comparing elementary, middle, and/or high school music teachers' responses, on a survey such as the one used in this study, could help determine if significant differences exist among various instructional groups/levels' specific conducting priorities.

Additionally, comparing a prioritized list of conducting technique items between those who teach choir as their specialized music teaching area and those who teach choir outside of their specialized music teaching area would be noteworthy to explore whether there are any priority differences between choral specialists and non-choral specialists when they conduct choral ensembles. Such findings can guide choral conducting and choral music

education instructors when ascertaining their approach to teaching choral conducting to non-choral specialists and in determining whether different topic foci be gathered in order that they develop the most effective classroom choral ensemble conducting practices given their training and experiences. Researchers could also consider completing research on the role that nonverbal conducting technique plays in support of student music making as well as the role nonverbal conducting technique plays in providing instructor direction. Both roles are important and should be explored further through focused research studies.

Limitations

Similar to previous online survey studies (Silvey et al., 2020; Silveira & Hudson, 2015; Silvey, 2011b; Sims & Cassidy, 2019), calculating a response rate in this study was infeasible due to the questionnaire distribution method of posting the survey invitation for participant recruitment purpose on the Facebook. I'm a Choir Director Facebook including members who were unqualified to participate in this survey such as church, community, and professional choir directors was another reason of difficulty of calculating response rate. However, recruiting choral music educator participants on Facebook was an efficient way to sample from classroom choir teachers who had diverse teaching backgrounds and varied teaching instructional levels.

This study provides a basis for further inquiry and discussion regarding the importance of specific conducting technical components in terms of nonverbal conducting technique preparation for individuals planning to teach choir in the classroom. According to Silvey et al., (2020) conducting course priorities and perspectives can be slightly different among course instructors and therefore determining the importance of conducting components, based on the results of this single study, may not be generalizable to all classroom choir teachers. In this study, the word, importance, referred to a nonverbal conducting technique or skill of significance or value as perceived by choral classroom music teachers. However, the perception of importance of one's nonverbal conducting technique could vary dependent on the context in which it is defined. For example, a difference could exist between what teachers as conductors and students as ensemble members perceive as important. Whether the meaning of the word importance was perceived as intended by the researcher could be questioned.

Conclusion

The purpose of this study was to explore choir teachers' importance ratings of 15 nonverbal conducting technique items. The findings in this study could contribute to conducting course instructors' technical skill organization and presentation in their course offerings especially for preservice music teachers' choral ensemble conducting preparation. Connecting the relative importance of classroom choir teachers' nonverbal conducting technical skills to conducting course topic selection could be effective when instructors specify their course components. For example, by providing appropriate technical exercises and

learning activities that provide hands-on course experiences, conducting course instructors may offer more meaningful preservice music teacher conducting experiences. By concentrating on highly valued nonverbal conducting items instructors can focus on and design opportunities that encourage the development of nonverbal conducting techniques such as providing right-hand indications for tempo changes, providing left-hand indications for crescendos and diminuendos, providing right-hand indications for attacks and releases, and providing facial/body indications for style emphases and changes (legato, staccato, etc.).

An investigation of classroom choir teachers' most important nonverbal conducting technique items may assist preservice music teachers, classroom music teachers, conducting course instructors, and choral music teacher educators in determining essential areas of instructional needs, improvements, and developments regarding music teacher preparation. By gathering classroom choir teachers' importance ratings of nonverbal conducting technique items, preservice music teachers can use the information from this study to review, reflect, and enhance their specific conducting technical skills. The same information can be useful for conducting course design and development. The choir teachers' responses gathered in this study can be beneficial in understanding which specific conducting technique components are viewed as essential when developing successful conducting techniques to be used in choral classroom conducting situations and as such can assist preservice music teachers in their preparations to become successful choral ensemble conductors.

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"Sing, sit, and leave": Engagement and Disillusionment in a High School Chorus

Frank Martignetti[1]

Abstract

This study provides insight into why students leave voluntary school choral experiences, through an analysis of interviews with four high school students at a single New York City high school who left, or were considering leaving, their high school choral program. This study provides a voice often unheard in the research literature, since many research subjects are people who have had positive feelings about their ensemble experience. Analysis through a lens of self-determination theory (Ryan & Deci, 2000) and student engagement theory (Deakin Crick, 2012; Reeve & Tseng, 2011) revealed strong feelings of engagement and disillusionment, providing insight into individuals' choices and motives. Principal themes included the perceived quality of the subject's relationship with the teacher/conductor and with other students; subject's perceptions regarding the focus and commitment level of the other students; and subjects' perceptions of rigor and the value gained from participation. These align with two of the elements of self-determination theory: belonging and competence. Implications for practitioners and for future research are suggested.

Keywords: Choral music education; ensemble participation; recruitment and retention; motivation; engagement; disillusionment; self-determination theory; student engagement theory.

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At a time when media reports in the United States report the need to rebuild school ensembles post-pandemic (Bryan & Velez, 2023; Burke, 2020; LaGuarda, 2023; Mortenson-Spokes, 2023; Paulson, 2022; Weller, 2021) and directors continue to make our ensembles more inclusive, it is valuable to gain insight into why singers may choose to remain in or leave a choral program. This study analyzed interviews with four high school students who left, or were considering leaving, their high school choral program, to examine what the lack of engagement might look like within a vibrant coeducational high school choral program in one large public school in a major United States city. The interviews were drawn from a larger data set in the author's dissertation (Martignetti, 2017), which was a large-scale ethnographic study of a vibrant music program in a diverse comprehensive New York City public high school.

Interviews with four young women, three of whom identified as BIPOC, demonstrated a variety of perspectives, including strong feelings of both engagement and disillusionment, as they reflected on the quality and meaning of their high school choral experience. One of the four subjects had left the program before the interview, and the others were considering whether to do so at the end of the school year. As choral conductors look for the best way to engage and retain singers, their perspectives and voices suggest effective strategies for chorister retention.

This study is among relatively few that focus on urban public schools, as opposed to suburban schools. Few studies have examined music education within the unique and diverse context of New York City—the largest public school system in the United States, although Elpus (2012) examined arts education within charter schools in New York City.

Literature Review

The robust literature regarding student participation in ensembles, students' motivation to join and remain in ensembles, and on student perspectives regarding the benefits and drawbacks of ensemble membership framed this study. It focuses on why people leave, or consider leaving, secondary school choral programs, when most studies discuss why people stay. This review is limited to literature examining the school choral experience in North American schools, among which the scheduling and recruitment models are very similar. It focuses first on who is represented and who is not; who perseveres and who does not; students' perspectives on the ensemble experience, the perceived value added and perceived cost of participation; and analyses of the ensemble experience in light of psychological factors, including motivation and self-concept.

Representation: Enrollment and Persistence

Who enrolls in secondary school music in the United States? Who does not? Who perseveres? Large-scale quantitative studies of enrollment in high school music courses within the United States in the twenty-first century provide helpful context, notably including Elpus and Abril (2011, 2019, 2024) and Elpus (2014). Elpus and Abril (2019) demonstrated

that the demographic makeup of US high school music classes significantly differed from the demographic makeup of US high school students as a whole, since Black, Indigenous, and people of color (BIPOC) tended to take these courses less frequently than did white students. Martignetti (2017), the study from which these interviews were drawn, had findings that were both similar and divergent: female students and white students were overenrolled in music courses at the site, relative to their representation in the school and community; Asian and Hispanic students were likewise relatively underenrolled. However, Black students were represented almost equally when compared to the student body as a whole (23.7% vs. 23%). These realities make the diversity of voices found in this study matter.

In terms of who continues to take music courses, Elpus and Abril (2024) found that higher socioeconomic status, academic achievement, and engagement in the arts outside of school were significant factors positively affecting students' persistence in music courses, whereas students from lower socioeconomic groups and BIPOC students were less likely to continue enrollment. Students who were born female were significantly more likely to persevere in choral ensembles. Parental influence, a positive assessment of personal musical skill, and peer influence positively affected choral recruitment and retention for Demorest et al. (2017). Similarly, Warnock (2009) found that parental encouragement, being female, and future aspirations in music correlated with ensemble membership, and Miksza (2007) found that academic achievement and socioeconomic status were strong predictors of music enrollment. Additionally, Kinney (2019) found that, in a single midwestern school district, academic high achievers were more likely to enroll and persist in elective coursework in instrumental music, also finding that choral students scored significantly higher on reading tests compared to non-music students in 6th, 8th, and 10th grades. Kinney also pointed out that choir had a more proportional representation of students from lower socioeconomic statuses than did instrumental ensembles, a finding supported by Elpus and Abril (2019), who found choral students were similar to the overall student population in terms of race, ethnicity, first language, or socioeconomic status.

Culp and Clauhs (2020) pointed out that "financial constraints, parental involvement, course/ensemble structure and offerings, repertoire selection, and scheduling may all affect a student's interest or ability to participate in a program" (p. 44). Baker (2007) found that 37% of subjects cited significant scheduling challenges as an obstacle to scheduling ensembles for all four years of high school.

Student Perspectives

What meaning and value do students attribute to secondary school ensemble membership? Adderley et al. (2003), Rohwer and Rohwer (2009), Sweet (2010), and Parker (2010) all highlighted subjects' perceptions regarding the social, musical, and recreational benefits of secondary school choral ensembles. Baker (2008) identified the value students placed on music participation as the strongest predictor that they would continue, and scheduling issues as the major factor negatively affecting continuation. Subjects reported both intrinsic

and extrinsic values.

Freer (2009) found that subjects identified experiences best described as the flow state identified by Csikszentmihalyi and others. Silveira (2013) found that honor ensemble participants valued musical factors above all, but most secondary music students reported extrinsic benefits. Findings in Parker's (2010) action research study of an urban high school chorus were grouped into five themes: students reported valuing the noncompetitive nature of the choral experience, social bonding within voice parts, singing as a shared experience, bonding through trips, and chorus as a safe space. Kennedy (2002) cited "love of singing, influence of the teacher, and the company of friends" as the experiences choral students reported valuing (p. 29). Major and Parker (2023) found that deep relationships, chances to lead, and a push for more autonomy characterized participants in one high school program. Much earlier, Cusick (1973) identified deep social connections between school ensemble members as an outcome characteristic of ensembles. Morrison (2001) posited that ensembles, somewhat uniquely among courses, have their own culture.

More specifically, in Adderley et al. (2003), students reported value in multiple aspects, organized by the researchers into "personal qualities, personal growth, emotional outlet, and atmosphere" (p. 199). Students valued the process of music-making, the improvement in their skills and knowledge, the ability to produce such a powerful emotional force, working towards a common goal, skills useful in other academic situations, and skills useful in careers. Students also found value in the social benefits of ensemble membership, such as strong friendships that continued outside the class, a long-term relationship with a teacher, the experience of travel, and the atmosphere of the ensemble classroom, which they described as "supportive, relaxing, and fun" (p. 199).

All of these studies featured the voices of participants, not those who have chosen to quit ensembles, or who were making that decision at the time of the study. Thus, the perspective found in these student voices is both rare and valuable. It is interesting to see how congruent the voices heard in this study are with the findings of previous studies, particularly in terms of the importance of interpersonal connections among ensemble members and with the director. However, sometimes the importance of these connections is noted by their presence, and sometimes by their absence. Holster (2023) observed:

> Perspectives on music student retention typically ignore the fundamental role of motivation in determining whether student interest in music ensemble participation will strengthen or wane as they mature and are presented with other options (McPherson & Hendricks, 2010). One consequence of this blind spot is an incomplete understanding of the factors contributing to school music ensemble participation.

Studies that have examined ensemble participation in light of various theories of motivation or engagement form a final layer informing this study and lead to the interpretive framework used here.

Adams (2021) explored self-concept and mindset as motivational factors. Hash (2022) pointed out that students will leave if their needs are not being met, and that teachers must think carefully about motivation. Holster (2023) examined existing studies of middle school ensemble members in terms of needs satisfaction and task values, concluding that teachers should examine student behaviors and choices through these two interpretive frameworks, one of which (needs satisfaction) shapes this analysis. Pendergast (2020) connected recruitment and retention to meeting students' basic needs, as found in Self-Determination Theory (Ryan & Deci, 2000): autonomy, belonging, and competence. Gurgel (2023) examined engagement and disengagement behaviors in a pluralistic middle school choral classroom, analyzed through the frameworks of culturally responsive pedagogy and student engagement theory. She found that positive student perceptions of the teacher and their practice allied with the extent to which teachers implemented elements of culturally responsive pedagogy (Ladsen-Billings, 1995) and supported student autonomy needs. Self Determination Theory and student engagement theory provide the framework for this analysis.

Framing the Study

Purpose Statement

This study explored how four young women in a diverse, urban public high school choral program weighted the perceived benefits and costs of school choral participation as they decided whether to stay or leave the program, documenting their feelings of both engagement and disillusionment. Their experiences resonated with much of the research literature but were notable for the ways in which they diverged from past work. Their voices have implications for directors' recruitment and retention efforts.

Research Questions

This study examined the following: What benefits did subjects report deriving from choral participation? Were there other benefits that they hoped to gain, but did not? What factors informed their decision process to stay or leave? How did the nature of the relationship with other students or the teacher affect their views on the experience? Had they experienced the benefits reported by the many studies above? Why? Why not? Which words or actions by the subject provided evidence of disengagement?

Context

The interviews analyzed here were drawn from 44 interviews with students and staff, carried out in the 2014-2015 academic year as part of the author's dissertation, a much broader, IRB-approved ethnographic study of a high school music program (Martignetti, 2017). The research site, a comprehensive high school of 4000 students in an outer borough of New York City, included an auditioned arts magnet program within the building, which enrolled almost a third of the student body. During 2014-2015, the student body

consisted of 27% Asian, 23% Black, 22% Hispanic, and 27% White students. Further, 17% of the student body had a disability, 7% of the student body were English language learners, and, according to New York State, 63% of the student body were considered economically disadvantaged (New York State Department of Education, 2015). For more details, see Martignetti (2017).

The research site was one of a relatively small number of large comprehensive high schools within the New York City Department of Education (DOE) that boasted a robust music program. The school included an auditioned arts magnet program within the building, which enrolled almost a third of the student body. During fieldwork, there were eight full-time music teachers employed at the school, one of whom taught and served as an administrator. Choral offerings included two sections of Beginning Chorus, Junior Chorus, Senior Chorus, Gospel Choir, and Madrigal Choir, as well as related courses: Voice Class, beginning piano and music theory, and AP Music Theory.

Participants

The sample of student interview subjects was purposeful, since all were present or former participants of the school's music program and were inherently self-selected since they chose to volunteer. Subjects were gradually recruited over the course of the school year. Written consent or assent for an interview was required by both student and parent, and teachers were unaware of who had volunteered, or not, for an interview. For more details, see Martignetti (2017). These four interviews (of 44) were utilized in this study because the theme of disengagement emerged inductively in the interview, and because one subject had left the program, and three were considering doing so at the end of the academic year. All subjects (or staff mentioned in interviews) were identified by a pseudonym, the school was not identified by name, and identifying details about the school were limited to those only directly relevant.

The four subjects are identified by pseudonyms: Carissa, Inez, Sami, and Elena. Carissa was a friendly, funny African American freshman in Beginning Chorus, notable for acting out during rehearsal and for the negative view she and her teacher shared of one another. She was the only interview subject of 32 students who spoke overwhelmingly negatively about her experiences in the music program. She had enjoyed a very positive relationship with her middle school chorus director and hoped for a similar relationship in high school. Her rapport with me was strong from the beginning. However, she brought to her high school chorus experience what seemed, to me, a fairly immature attitude, resulting in behaviors that antagonized her teacher on a regular basis: being late, wearing headphones, talking.

Inez was a Latinx senior who entered high school without a strong interest in music and a background in dance. Her mother strongly valued music but her maternal grandparents discouraged her from studying it. Inez' middle school experience, which she described as "artless," offered no music instruction at all—only visual art. Inez became active in the high

school choral program because of transformational experiences in her Beginning Chorus class, which she attributed to the teacher. Inez had a good deal to say about the program, and came across as enthusiastic but at the decision point where she would either stop singing or sing for life.

Sami, an Asian-American junior, described her social circle as "most of my friends were in the music program and dropped out. But I still have friends in the music program." She described her teachers as "amazing" but bewailed a lack of motivation on the part of some students as her main frustration, in addition to the amount of class time she felt involved simply waiting for error correction or rote teaching to happen. She also expressed a strong sense that deep interpersonal connections with other students were easier formed in other classes than they were in choir. She was very reflective, speaking at length about the strengths and weaknesses she saw in the program.

Elena was a White senior who had left the choral program but maintained close relationships with multiple music faculty. Her decision to leave was partly due to significant personal problems experienced as a sophomore, when she experienced influential support from her music teachers, but she felt ignored or undermined by her (now former) friends in the program. Her experience as a senior was marked by a strong sense of closeness to the music faculty and estrangement from other music students. She spoke at length about her relationships at school, positive and negative, about music, and her strained relationship with her mother.

Methodology

Quantitative studies of secondary music enrollment reveal representation, or lack thereof, and can demonstrate changes over time, but qualitative research can provide rich insight into individual's choices and motives. Both provide important insights. Creswell (2013) said that we use qualitative research when we:

> need to study a group or population, identify variables that cannot be easily measured, or hear silenced voices… We also conduct qualitative research because we need a complex, detailed understanding of the issue. This detail can only be established by talking directly with people… We conduct qualitative research when we want to *empower individuals* to share their stories, hear their voices, and minimize the power relationships that often exist between a researcher and the participants in the study (p. 48).

The interviews utilized a semi-structured protocol as a starting place and were audio recorded using a tablet, laptop, or handheld digital recorder. The interviews were then transcribed into Microsoft Word documents, as were field notes. The professional transcriptionists I engaged received only a number, not a name, and I reviewed the transcriptions before I sent them to the subject for verification or a sort of modified member checking.

Additionally, the school's principal and assistant principal in charge of music had the opportunity to review and comment on the entire study.

Data analysis followed Creswell's (2013) data management spiral: reading and memoing; describing, classifying, and interpreting; and representing and visualizing (p. 183). Repeated readings built my familiarity with the data, and I employed memoing to begin processing the data. Data were also analyzed with the qualitative research software ATLAS-TI. The list of codes emerged from the analysis based on repeated readings, and the software allowed for collating different subjects' words regarding the same code, to determine which codes were most prevalent and identify patterns.

As an important strategy within qualitative research, interviewing centers the voices of subjects, allowing their experiences to emerge in great detail and for analysis to inductively emerge, rooted in participants' words (Lofland et al., 2006: Wolcott, 2008). An ethnographic approach enabled the researcher to "use the resources, skills, and privileges available… to make accessible—to penetrate the borders and break through the confines in defense of—the voices and experiences of subjects whose stories are otherwise restricted and out of reach" (Madison, 2012, p. 6). Ethnographic methods provided a wonderful way to bring forth the stories of these disillusioned choristers. Additionally, ethnography was a useful lens when applied to topics familiar to the researcher, since ethnography can "make problematic what might otherwise be taken for granted" (Wolcott, 2008, p. 89). This approach provided a fresh lens examining the familiar context of an urban public school music program.

Positionality

As an American public school music teacher for ten years, including eight teaching high school chorus, and seven in an urban public school, the research site was, in many ways, familiar to me. In other ways, I was very much the outsider, having worked in small schools, which offer different challenges and opportunities than large schools. As a white, straight male, I had a different background from the majority of students. During fieldwork and analysis, it was necessary to reflect, being careful that past experience did not encourage me to only interpret things as a teacher would, or resist experiences that were different from my own education or previous professional practice.

More broadly, as a choral music educator, I believe chorus is extremely beneficial for many humans, at all stages of life, which made me work harder to understand why these four students found the experience disappointing.

Theoretical Framework

Beyond students' choices to participate, or not, in a voluntary commitment such as a school chorus, engagement or disengagement is evident in the degree of participation, observed connection to the ensemble as a whole, and the nature of interactions between the subject and others in the choral setting. I had originally planned to present here a new anal-

ysis rooted in self-determination theory (Ryan & Deci, 2000) but also discovered student engagement theory (Deakin Crick, 2012; Reeve & Tseng, 2011), which builds on self-determination theory, another useful theoretical framework for interpretation and analysis, first applied to school choirs by Gurgel (2023).

Ryan and Deci's (2000) concept of self-determination theory evaluated experiences by how well they met a subject's basic psychological needs for autonomy (feeling authentic, having agency), belonging or relatedness (feeling connected, and cared about), and competence (able to complete needed tasks well).

Reeve and Tseng (2011) built, in part, on self-determination theory, and in part on the consensus regarding the three-part structure of student engagement—which could be behavioral (what students did), emotional (how students felt), and cognitive (how students thought)—by adding a fourth concept—agentic engagement (students taking independent action to improve themselves or their situation), the presence of which correlated with the other types of engagement as well as the elements of self-determination theory. Pointing out that engagement is not a one-way process, since teacher actions influence student attitudes and actions, which in turn can affect teacher actions, Reeve and Tseng proposed the concept of agentic engagement, which they defined as "the process in which students intentionally and somewhat proactively try to personalize and otherwise enrich both what is to be learned and the conditions and circumstances under which it is to be learned" (p. 258). Agentic engagement is a student attempt to "enrich the learning opportunity (by making it more personal, interesting, challenging, or valued)" (p. 265).

Observable student behaviors are a clear mark of engagement in any performance-based experience like a choral ensemble, but the typical structure of many choral programs, where the entire class works on the same task in real time (choral rehearsal and performance) may provide limited space for agentic engagement, as may neoliberal educational systems writ large. Deakin Crick (2012) reminded us that the current policy climate fosters an education largely limited to the presentation of predetermined knowledge in the most engaging way possible:

> Engagement in the form of compliance…may yield learning that is fragile and dependent, with a passive acceptance and memorisation… In contrast to this, deep engagement in learning requires personal investment and commitment—learning has to be meaningful and purposeful in the life of the learner (p. 676).

The author posited a definition of engagement involving multiple related factors, including identity, agency, learning power, and competence, as well as how students co-construct knowledge, which is also a key part of Ladson-Billings's (1995) culturally responsive pedagogy. Learning power was defined as skills and traits that enable students to conquer learning challenges, both inside and outside of traditional educational spaces. Behavioral engagement or disengagement is clearly evident when observing a choral rehearsal and

performance; looking more deeply, students' senses of autonomy, belonging, and competence form a major rationale for singers joining, remaining, or leaving a chorus. In this study, subjects' words provided a window into their engagement level as well as their senses of autonomy, belonging and competence within the choral program.

Findings

Analysis of all four interviews revealed strong common themes: the perceived quality of the relationship with the teacher/conductor, the perceived focus and commitment of other students, the perception of rigor; and the perception of value added. What lasting benefit did subjects perceive themselves as deriving from the experience? Are they accomplishing anything of lasting benefit, or do they just "sit, sing, and leave," as one subject stated?

Additional themes found in one or more, but not all, interviews included perceptions of the presence or absence of culturally relevant repertoire, a sense that autonomy needs were not being met, and a feeling of estrangement from the teacher or from classmates.

Discussion

An exploration of these themes provides the deep description that is a major attribute of qualitative research, connects to related literature, and provides implications for practice.

Belonging

Relatedness or belonging is a second aspect of Self-Determination Theory. Being part of a community has been a primary benefit of ensemble membership, as reported by Cusick (1973), Adderley et al. (2003), Rohwer and Rohwer (2009), Sweet (2010), and Parker (2010), among others. Adderley et al. (2003) expressed it memorably:

> According to many of these teenagers, the description of their participation in each ensemble varied from being viewed as a class like any other classroom, a home away from home, a club, a family, or something unlike anything else at this school… Many of the findings support earlier research, providing a stronger case for the claim that students are intellectually, psychologically, emotionally, socially, and musically nurtured by membership in performing ensembles (pp. 203–204).

The connections that produce a feeling of belonging come from both peers and the student–teacher relationship. All four subjects identified a personal connection with a teacher as a major reason for joining or, initially, remaining in a school choral program. Sami expressed this less strongly than the other subjects, but identified loyalty to the current and retiring senior chorus teacher as a major factor in her and others' retention. Inez and Elena identified transformational experiences with one high school chorus teacher. As Elena said:

> And I did not expect to like it, but everyone was extremely nice and very welcoming…really, really started to love the music program and the first music teacher I met was Mr. Rosen, and I thought he was amazing… I think, honestly, my favorite part of the school is the music program. I come to the music hall all the time, so that's the reason I fell in love with this school.

Carissa identified such a deep connection, as well as a sense of being challenged, as a large part of her middle school choral experience, though not her high school experience:

> He believed in us. There was the group of kids that did not do anything. And he would take us on a lunch break and work with us. He even said he believed in us and that we had so much potential. The potential to do so many things in life. And if I did not sing, he would make/force me to sing because he would say, I know you can. I respect him for making me push myself.

This strong bond with the music faculty sustained Elena even after leaving the choral program: "I mean, honestly, when I walk into this school, I'm not in the best mood. But once I walk into the music hall, I just like—my mood gets uplifted… I always come here because all the teachers really have a great spirit. And they understand."

Notably, the subjects' perceptions of warmth and care provided by the chorus teacher were an important motivation for their decisions to engage. In one instance, the lack of such feelings and the resulting disengagement were striking. Carissa identified a fraught relationship with her high school chorus teacher as a major obstacle, even as she failed to understand how her own behavior contributed to this dynamic. She described the teacher as feeling attacked and getting "mad about small things." Entering the classroom with headphones on one morning led to a verbal altercation:

> Like, I remember this one day…it was raining; I forgot my umbrella. I had my headphones…and was getting ready to take them off. And she starts screaming at me. So I kind of walked out. Gave myself a minute… I walked back in. I had the headphones off. And she calmed down. But she said she still had to punish me, because I was rude… I told her I did not want to be rude, but I wanted to know how it would help. And she pulled me out of the classroom to tell me that I was being rude. So I told her I was not trying to be rude, so why was she stressing on me?

This set a pattern of disengagement and frustrated teacher response for the rest of the year:

> CT (subject): She has a problem with my attitude. And it is just the way I come off… she is my first class every day. And I am, like, always tired. So when I am tired, I look

> drained, and I don't want to do anything. So she is always talking about my attitude. It is just that I am tired; I don't have an attitude. It takes me a while to get up. And she just keeps yelling at me.
>
> FM (Researcher): And what have you started doing differently?
>
> CT: Nothing.

In addition to feeling a lack of care, it is clear that Carissa's autonomy needs were not being met in chorus. Despite this antagonistic relationship, Carissa felt she was more respectful to her chorus teacher than many of her peers, yet her respect was expressed partially through having as little contact as possible:

> She is a nice teacher at heart… People take advantage of her. I don't do that. I don't think that is respectful… I would like her to talk to me better. I try to have the least amount of verbal contact with her. Because if you don't talk to her, there isn't a problem… When she starts yelling, it is kind of funny, but not really. Because then she preaches and says that she rebukes this and that and kids laugh. I try not to.

In terms of peer relationships, three subjects identified a lack of closeness to other students as an issue creating a lack of belonging—the inverse of the strong social bonds reported by participants in other studies mentioned previously. Inez mentioned multiple friends who had left the choral program, but they were friends she had made within the program. She was the exception. To Elena, her former friends and classmates in the choral program were, literally, almost invisible: "I don't even see them. I see them, but they move right past me…they were not there for me 'cause they just, they didn't care."

Sami said that she felt very close to people in the music program on trips, but most of her friends in the program had dropped out. She felt there was much more opportunity to get to know and bond with people in her visual art classes, "but when you are singing, you don't talk." It seems evident that none of these four subjects' need to belong were met through peer relationships in the choral program. Sami found limited opportunities to form or strengthen friendships. Their experiences indicate findings similar to Gurgel (2023)—that choir often offers limited opportunity for cooperative learning or small group work.

The subjects' words demonstrate the centrality of the connection between the chorus teacher and the student. Many students will become involved, and stay engaged, if a positive interpersonal connection is present; each of these subjects identified a strong student-teacher relationship as a reason for involvement. However, three of four expressed feelings of estrangement from their peers; chorus was not meeting their belonging or relatedness needs. Three of four participants' next reason for disillusionment also involved their peers.

Focus, Commitment, and Rigor

Inez identified a lack of commitment in her Beginning Chorus class freshman year, but perceived an increase in rigor or focus within the program overall, even though she had mixed feelings about this change:

> I feel like there's a lot more talented people coming in—a lot more determined people. Which is a little scary. It's like well, why are you so, like, determined? So, like, strong, like this? I came in here, I didn't even know what I wanted to do, and they're like, "No, I've been looking at this school for years. I know I'm going to do this, I'm going to do that, and I want to audition for this." …And I'm, like, seeing it, and I feel like I don't fit in anymore. It's like I don't recognize people as much.

However, this was a minority view; Carissa cited her classmates in an especially challenging section of Beginning Chorus as quite disrespectful:

> She has taken a lot, and I respect her for that. Especially because they randomly yell at her when she is talking. That's rude… Again, it is the way she comes off, and some students don't like that. So they don't respect her. I respect her; she is my teacher…

Surprisingly, Elena felt that she had a similar experience as a junior in the upper-level ensembles:

> I've had a really, really tough time… I feel like a lot of them do not care, so most of the time they're talking and yelling and it's really, really hard to get work done when you're actually like the only person that wants to be singing… I realized that I have no control over it. They have to shut up themselves.

This lack of self-control seems to point to students not valuing the intrinsic attributes of the process that subjects in Adderley et al. (2003) reported valuing. In terms of Self-Determination Theory, the fellow students described by these subjects are exercising agency, may or may not feel like they belong, but may not feel they are growing in competence. In terms of Reeve and Tseng's (2011) theory of agentic engagement, the students described by the subjects were exercising the opposite of agentic engagement. The subjects were expressing a desire to exercise agentic engagement to make the learning environment "more personal, interesting, challenging, or valued" (p. 265).

Sami provided the most detailed view of her peers' disengagement, and a reason for it. She blamed a lack of self-discipline, but also the resulting pace of some rehearsals. She also felt that instrumental students had more discipline and self-sufficiency:

> Sitting in class for an hour every day, you have to be quiet. And, sometimes, kids

> don't have the patience for that. It has to be something you really enjoy…this class is, like, be silent and listen to them learn their parts over and over and over again. And it's repetitive and very slow, especially with the kids that are in our class… I have thought about quitting for a really long time…it is hard to decide. I think I would miss it. At the same time, I don't know.

Sami partly attributed the lack of focus that frustrated her to a lack of accountability. All three of these subjects felt that their need for competence was not being met due to others' lack of seriousness. Yet Sami added another layer, voicing that people were not learning transferrable skills or growing in terms of individual musicianship: "It doesn't seem like you are special in this program. Like you're learning to manifest your abilities. It's like sit, sing, and leave." This quote was especially revealing, touching every aspect of self-determination theory: autonomy, belonging, and competence. Sami did not feel like an individual, like part of a community, or like her musical competence was growing as a result of her choral experience. The positive relationship that she felt she had with her chorus teacher was not enough; she felt aloof and had a sense that she is not growing. This points to our last theme: growing in competence, or a sense of challenge, competence, and added value.

Challenge, Competence, and Value Added

Self-Determination Theory (Ryan & Deci, 2000) holds that people wish to feel competent. Competence comes from successfully completing tasks that are at an appropriate level of challenge. Those engaging in voluntary learning experiences like secondary choral programs would like to feel like they are gaining new knowledge or skills through the experience. What did these subjects believe about their own competence?

Perceptions of competence, challenge, or value added, as expressed by the other three subjects, were rather nuanced. When reflecting on her experience in Beginning Chorus, Carissa expressed a mixed view, feeling that she had learned a lot about how to sing but that her understanding of music had not grown:

> FM: So, what have you learned in Beginning Chorus this year?
>
> CT: Don't talk back to the teacher.
>
> FM: Ok. What else?
>
> CT: How to project my voice without straining my vocal cords.
>
> FM: That is a big thing.
>
> CT: I learned how to sing from my diaphragm, which made my voice better.
>
> FM: Ok. That's good. What do you wish you had learned?
>
> CT: How to read music…she stopped doing that… I want to learn.

Inez, who had entered high school with very little musical experience, felt that her knowledge and skills had significantly grown. She perceived herself to be behind her peers in music reading ability and she was nervous about recording herself singing for homework assignments. But she challenged herself and overcame these fears. Elena felt that the opportunities provided by the faculty were excellent but that the students did not take full advantage of them, thus requiring the teachers to ask less of the students:

> I've had so many great experiences performing in this school… I've performed with all the choruses. I've performed with the jazz band and…there was like a Marvin Hamlisch tribute, a memorial tribute at Julliard, and… I was one of the students chosen…she's one of the teachers that really believes in me.

At the same time, Elena felt that her choral teachers could have demanded more and provided more depth:

> I just feel like they go too easy on us…they really have to push us just a little bit more. Not just with how strict they are, but they have to just give us more work and give us more to learn about and don't make it too easy for us.

Although Elena appreciated the level of performance opportunities she had, her decision to drop out of the music program was partly due, coincidently to the challenges that she faced in her AP Music Theory course, which she found extremely demanding and stressful. This course was required of seniors in the auditioned magnet program. Elena experienced the stress of having to work after school, and felt, as a singer, ill-prepared, contrasting that with instrumentalists:

> I decided that the music theory class was just not something I wanted to fail at and that it would be too difficult for me because I did not learn a lot about theory; there were a lot of band students, and they know a lot more than I do, so I…felt left out.

Like the subjects in Adderly et al. (2003), Kennedy (2002), Rohwer and Rohwer (2009), Sweet (2010), and Parker (2010), these subjects value the musical learning that can happen in choir. They wished to demonstrate their competence, conquer challenges, and grow in musical knowledge and skills. Three of the four subjects identified specific, meaningful learning that resulted in an increase in their sense of competence as singers and/or musicians. Two of the four subjects identified specific challenges that resulted in an increase in their skills. One challenge was identified as both a reason to stay involved in the program and a reason to leave. All four subjects seemed to feel that the faculty were able to provide a challenging experience; three of four saw other students as an obstacle.

Culturally Relevant Pedagogy

Subjects in this study clearly identified certain practices of their chorus teacher as reasons for enrolling in and remaining in (and, in Carissa's case, considering leaving) the choral program. These are practices identified by Ladsen-Billings (1995) as characteristic of culturally relevant pedagogy. As previously shown, the upperclassmen who had participated in chorus for multiple years clearly felt that their chorus teachers believed that all students had the ability to succeed, that they connected with their students, and that teachers were passionate about their subject and teaching it. Carissa, the freshman, had formed this impression of her middle school chorus teacher but not of her high school chorus teacher:

> We knew what chorus was like, but we did not know it was like this… He believed in us. There was the group of kids that did not do anything. And he would take us on a lunch break and work with us. He even said that he believed in us and that we had so much potential. The potential to do so many things in life. And if I did not sing, he would make/force me to sing because he would say, I know you can. I respect him for making me push myself.

However, culturally responsive pedagogy also involves several other elements not identified by the subjects, particularly teachers' conceptions of knowledge. Although they may have been a part of the teachers' practice, they are beyond the scope of this study. Further, the subjects identified other key elements of culturally responsive pedagogy by their absence: all four subjects identified a lack of community or connection and commitment to the work of the chorus, as shown by the above discussion.

This subject's statements allow one to conclude that the community of learners and encouragement of collaborative learning and mutual responsibility cited by Ladson-Billings may have not been present. Though the broader ethnographic study from which these data are drawn (Martignetti, 2017) identified many elements of culturally responsive pedagogy present within the music department, these seem likely to have been two challenges faced by the choral program. As Gurgel (2023) states of her subjects:

> They engaged when the music-making was interesting and challenging and when their teacher connected the musical learning to their lives…the teacher must convey a sense of purpose in musical activities resulting in musical achievement and excellence…for the student participants in this study, purpose and challenge supported deep engagement and formed the foundation for increased student learning, agentic engagement, affective engagement, and group unity (p. 16).

Conclusions and Implications

This study sought to understand why these subjects had left, or were strongly considering leaving, their high school choral program. Their voices provide clear evidence of both

engagement and lack of engagement across four common themes: their perception of a strong relationship with the teacher/conductor; their perception of the focus and commitment of the other students (or lack thereof); their perception of rigor; and the perception of value added.

In terms of belonging, these subjects expressed strong feelings of connection to a present or former choral music educator, and identified this as a major reason for joining, but exhibited a weak connection to other members of the ensemble. As they shared this, it was clear they yearned for the same connection experienced by subjects in studies including Adderley et al. (2003); Rohwer and Rohwer (2009); Parker (2010); and Sweet (2010). This is a notable gap in the literature, in that studies of ensemble participation tend to, overwhelmingly, focus on those involved, not those who are not involved, or used to be involved. I believe it is difficult for researchers to connect with students who have left the school's music program, given that our entrée to schools often goes through the music faculty, and since we are reliant on volunteer research subjects. Two of these four subjects had offered to introduce me to others who had left but did not follow through.

Since it is challenging for music education researchers to locate and engage with people who have chosen to stop participating in ensembles, these subjects provide a valuable perspective that is largely absent from the literature but that is useful to choral directors and researchers. A future study of students who have left school choral programs could combine perspectives of individual subjects, as gained through interviews with targeted observations seeking to identify and describe the sort of engagement and disengagement behaviors noted by Gurgel (2023) among the students who remain in the program. Such a perspective would add nuance to the sense that ensembles are often a welcoming place where participants experience community. An additional direction for future research would be to further examine approaches to choral music education that do foster opportunities for cooperative learning or small group work, and, through surveys or interviews, establish whether such approaches create strong bonds among singers, and whether they foster agentic engagement.

For practitioners, I believe strong, positive student-teacher relationships are vital; they form a primary aspect of culturally responsive pedagogy (Ladsen-Billings, 1995), can be helpful to all students, and are vital for school dependent students. The student voice in this study demonstrates the need for directors to foster a strong community in our ensembles that meets our students' needs for relatedness and belonging and genuinely includes all. This requires us to continually examine who is in the room, who is not, and do some action research to find out why.

Just as subjects identified a desire for belonging, and were frustrated by its absence, subjects identified both satisfaction with what they were learning, and a longing for more. Notably, two subjects identified the perceived lack of opportunities for personal growth in musical skills and knowledge as a reason to consider leaving, and two others cited major growth in those areas as a reason for staying. All were in the same program and, in three

of four cases, with the same teacher. For the two subjects who saw the glass half empty, the longing for challenging learning they saw as useful, and lament for a learning environment that seemed to foster a lower level of focus, commitment, and achievement contributed to their disillusionment. The lack of focus identified by Sami points to what I believe to be a destructive cycle that can manifest. I have seen it in my own time as a secondary school teacher. If students require a good deal of repetition to learn their parts, because they are not learning to audiate or sight sing effectively, and/or because of a lack of maturity or effort, the pace of rehearsal slows, the level of music making drops, and the group becomes even less engaged. A future line of research could examine how effective directors create challenge and growth at any level of ensemble. Another future line of research could explore how teachers enter and remain in the destructive cycle of low focus leading to a slower pace of learning which may lead to even lower focus. As practitioners, we must ensure that the experiences we are providing genuinely meet students' need to become more competent, to grow as singers and musicians, and to be aware that they are doing so. Nothing is more motivating than success. Creating growth from point A to point B, and helping your students develop the self-evaluation skills so they can see and celebrate their growth is a prerequisite for a highly engaged ensemble.

Students know when they are learning and when they are growing, and when they are not. High expectations, with appropriate scaffolding and realistic goals with the right degree of challenge will help directors create ensembles that retain singers. All in all, the subjects in this study, like the subjects in others, want the same benefits from their choral experience. They are just part of the silent many who do not receive those benefits and may vote with their feet. May we work to reach those singers before it is too late.

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Self-Efficacy and Achievement among Secondary School Vocalists: An Exploratory Study

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Abstract

The purpose of this study was to investigate music performance self-efficacy and achievement among secondary school choral music students. I specifically examined the relationships between the four sources of self-efficacy (enactive mastery experience, vicarious experience, verbal/social persuasion, and physiological and affective state) and the composite construct, as well as years of private lessons and practice time. In addition, I compared self-efficacy beliefs by grade, school, voice part, camp attendance, and voice lessons. Participants (N = 42) completed the Music Performance Self-Efficacy Scale (Zelenak, 2011), provided demographic data, and reported average weekly practice time in preparation for a competitive choral event. Results indicated a significant negative correlation between Verbal/social persuasion and competitive ranking (r_s = -.36, p = .02). Those with higher scores on the verbal/social persuasion subscale were ranked higher (received a lower number ranking) than those with lower scores. I found no significant differences in composite self-efficacy beliefs among voice parts, grade levels, or those engaged in private vocal instruction. The results contribute to the literature linking musical self-efficacy and achievement and replicate previous findings of the relationship between the verbal/social persuasion factor of musical self-efficacy and achievement.

Keywords: self-efficacy, performance achievement, choral music education, Music Performance Self-Efficacy Scale, choral performance

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Human thought has a powerful influence on a range of behaviors. An individual's self-perception can have a substantial impact on how they feel, what they are motivated to do, and their overall psychological and physical well-being (Pruthi, 2022). Psychologist Albert Bandura (1977, 1997) was the first to define self-efficacy as a person's set of beliefs that determine how well they can execute a plan of action in prospective situations. Since the late 1970s, researchers have observed that self-efficacy beliefs influence both psychological and biological processes and contribute to performance in many contexts (e.g., Bandura, 1997; McCormick & McPherson, 2003; Pajares, 1996). Different people who share a similar skill level or even the same individual in different circumstances may perform expertly, adequately, or poorly depending on fluctuations in their self-efficacy beliefs (Schunk, 1989).

Bandura (1977, 1997) identified four sources that influence an individual's self-efficacy: (a) enactive mastery experience, (b) vicarious experience, (c) verbal/social persuasion, and (d) physiological and affective state. He noted that enactive mastery occurs when a person experiences success at a given activity. The repeated instances of success on a particular task then positively influence self-efficacy. In a choral setting, a student might experience enactive mastery experiences by successfully performing in a concert setting or participating in a mock audition. Vicarious experience occurs when an individual observes another person successfully attempting a task, such as when a singer observes a peer's successful performance. Bandura described verbal/social persuasion as the influence of others, including peers, teachers, and family who may encourage or discourage an individual through comments and actions. In a choral setting, this may manifest through positive affirmations of a musical performance by peers or a teacher encouraging a student to pursue advanced musical challenges. Finally, he labeled how a person experienced nervousness or anxiety that resulted in symptoms such as faster heart rate, shortness of breath, sweating, or other physical reactions as physiological and affective state. Researchers have confirmed the four sources of self-efficacy in various academic subjects (e.g., Usher & Pajares, 2006, 2009), including music (Hendricks, 2016; Lewis & Hendricks, 2022; MacAfee & Comeau, 2020; Martin, 2012; Zelenak, 2011, 2019).

Self-Efficacy Beliefs in Music

Within the context of music, scholars have investigated the four sources of self-efficacy among jazz performers (Wehr-Flowers, 2007), non-music major collegiate music participants (Karki, 2023), collegiate vocalists (Lewis & Hendricks, 2022) and secondary ensemble members (Hendricks, 2013; Long, 2016; Zelenak, 2011, 2019). Consistent with Bandura's (1997) theory, most investigators have reported enactive mastery experience to be the most influential source of self-efficacy beliefs in music performance (Hendricks, 2009; Karki, 2023; Long, 2016; Zelenak, 2015). Zelenak (2019) noted that enactive mastery experience has consistently exhibited the strongest relationship to composite self-efficacy followed by

verbal/social persuasion, physiological and affective state, and vicarious experience. However, other researchers have reported that the degree of influence of each source of self-efficacy beliefs varied according to individual personality differences and that any source of self-efficacy may emerge as most influential to the composite score (Lewis & Hendricks, 2022). Additionally, Karki (2023) observed that among collegiate non-music-majors, physiological and affective state was more influential than verbal persuasion on composite self-efficacy beliefs. Together, the varied observations indicate that the relative strength of the relationships may differ depending on temporal, contextual, and demographic factors.

Scholars have reported mixed results when examining differences in self-efficacy between variables, including gender, grade level, and musical instrument. Some researchers found no significant differences between gender and self-efficacy (Cahill Clark, 2008; White, 2010; Zelenak, 2019). Others reported that differences were dependent on age/level and observed higher musical self-efficacy perceptions for females than males in primary school (Ritchie & Williamon, 2011), high school (Hewitt, 2015), and college (Karki, 2023). In contrast, some scholars observed that males had higher musical self-efficacy beliefs than females in middle school (Hewitt, 2015) and high school (Hendricks, 2009). Hendricks (2013) posited that gender differences in music performance self-efficacy may be related to environment. Among high school orchestra students participating in a competitive festival, she found that particularly for females, musical performance self-efficacy increased as participants perceived competition among ensemble members to diminish. In a follow-up study with members of an all-state orchestra, Hendricks and colleagues (2015) again observed that for females, as ensemble focus shifted away from competitive ranking and toward collaborative interactions, their musical performance self-efficacy beliefs improved. Findings have also been inconsistent among studies examining self-efficacy by musical instruments. Hendricks (2009) reported higher self-efficacy among wind and percussion students when compared to string students, but Zelenak (2015) observed no differences among band, choral, and orchestra students. The varied observations suggest that more research is needed to understand the relationships between variables such as grade level, musical context, gender, and music performance self-efficacy.

Music Performance Self-Efficacy and Achievement

During a musical performance, musicians display a complex set of acquired skills including musical knowledge, technical facility, and physical ability. The quality of performance (musical achievement) is often determined by content experts evaluating the performance using pre-determined criteria (McPherson & McCormick, 2006; Smith, 2004; Zelenak, 2019). Two seminal studies in music education provide the foundation for the line of research on the effects of self-efficacy on musical achievement. McCormick and McPherson (2003) reported that in young adult musicians from Australian secondary schools, performance quality was positively correlated with self-efficacy. Furthermore, they found self-efficacy to be a stronger predictor of performance quality than the quantity of practice time.

In a replication of this study, McPherson and McCormick (2006) confirmed that self-efficacy beliefs predicted performance quality in a sample of secondary instrumental students. They also reported that students with high self-efficacy beliefs engaged in more cognitive practice strategies during their preparation for performance. Ultimately, they concluded, "Teachers should pay more attention to their students' perceptions of their own personal competence, given evidence that these types of perceptions accurately predict their motivation and the future decision they make about their desire to continue improving" (p. 337). In later studies, researchers observed that self-efficacy was related to practice strategies employed by high school (Cahill Clark, 2013) and university music students (Nielsen, 2004). Participants who reported higher musical self-efficacy beliefs used more learning and study strategies during practice sessions. These studies corroborate nuanced relationships between an individual's music performance self-efficacy, motivation, and performance.

Additional research confirmed the relationship between self-efficacy beliefs and competitive music performance in various contexts (e.g., Cahill Clark, 2008; Ritchie & Williamon, 2012; Zelenak, 2019). In a recent meta-analysis, Zelenak (2024) identified 19 studies that examined the relationship between the composite construct of musical self-efficacy and achievement in music performance and calculated an overall moderate effect size ($r = .44$) between the two variables. Across demographic variables and musical context, researchers consistently report a positive relationship between an individual's composite self-efficacy beliefs and the evaluation of their musical performance.

Need for the Study

Despite the body of research investigating the composite construct of musical self-efficacy and performance achievement, I found only one study that investigated the four sources of self-efficacy and achievement in music performance (Zelenak, 2019). In that study, secondary school band and orchestra students ($N = 73$) in a large school district in the southeastern United States completed measurements of musical self-efficacy prior to auditioning for elite county ensembles. Student performances were evaluated by panels of music educators and ranked in order from highest to lowest for ensemble placement. For string students, there was a significant positive correlation ($r = .46$, $p = .02$) between composite musical self-efficacy beliefs and performance achievement. Additionally, self-efficacy beliefs predicted 15% of the variance in performance achievement. Verbal/social persuasion was the strongest positive predictor of performance among the four sources followed by enactive mastery experience. This finding warrants further investigation in other populations. Additionally, there is a lack of research with choral participants. When examining differences in effect sizes in the relationship between self-efficacy and achievement between instrumental and vocal participants, Zelenak (2024) acknowledged that most self-efficacy studies examined instrumentalists with very few investigating the self-efficacy of vocalists. Considering the observation of Lewis and Hendricks (2022) that self-efficacy beliefs may be particularly salient for vocalists because, unlike other musicians, their instruments were

part of their bodies, further investigation using populations of choral musicians is needed.

Therefore, the purpose of this study was to investigate music performance self-efficacy and achievement among secondary school choral music students. I specifically examined the relationships between the four sources of self-efficacy (enactive mastery experience, vicarious experience, verbal/social persuasion, and physiological and affective state) and the composite construct, as well as years of taking private lessons and practice time. The primary research question guiding this study was: What relationships, if any, exist between the four sources of musical self-efficacy, composite music performance self-efficacy, voice part, practice time, and achievement? Additionally, because of the known relationship between enactive mastery experience and the composite self-efficacy construct, I explored relationships between the overall audition preparation strategies (private voice instruction, attendance at all-state preparatory camps, and estimated practice time), self-efficacy, and achievement.

Method

Participants

Teachers from choral programs ($N = 3$) in a single school district in the southwest United States comprised of three large comprehensive high schools agreed to participate in the study, allowed their students to be recruited, and shared audition results with the researcher. The schools comprised a convenience sample accessible to the researcher's institution which were preparing and auditioning at a common competition. I distributed printed parent consent forms to the 53 students participating in the preliminary region-level audition for the all-state choir at the three schools. Ultimately, I obtained consent for 43 participants (School 1, $n = 7$; School 2, $n = 22$; School 3, $n = 14$) who then completed the survey, resulting in an 81.13% participation rate. Examination of stem-and-leaf plots and scatterplots revealed one extreme outlier, which I removed, resulting in a final sample size of $N = 42$. Participants were in grades 9–12 (9th, $n = 4$; 10th, $n = 12$; 11th, $n = 14$; 12th, $n = 12$). For all-state choir auditions, singers were classified into eight voice parts. Participants in the study represented all auditioned voice parts (Soprano 1, $n = 8$; Soprano 2, $n = 4$; Alto 1, $n = 3$; Alto 2, $n = 5$; Tenor 1, $n = 4$; Tenor 2, $n = 6$; Bass 1, $n = 9$; Bass 2, $n = 3$). I did not include gender in the questionnaire in this study because of concerns from school district research review boards about research with minors that allowed for gender identification beyond a binary variable. However, teacher participants indicated that most treble voice students ($n = 20$) identified as female while most tenors and basses ($n = 22$) identified as male.

Instrument

The questionnaire included three sections: demographic information, questions relevant to preparation for region choir auditions, and the Music Performance Self-Efficacy Scale

(Zelenak, 2011). Demographic information included school attended, grade, and voice part. Participants reported information relevant to their preparation for region choir auditions, including enrollment in private voice instruction, attendance at all-state preparatory camps, and individual practice time. Previous literature indicated that private voice teachers were a significant source of self-efficacy beliefs for vocalists (Lewis & Hendricks, 2022); therefore, participants indicated whether they were enrolled in private voice instruction outside of choir and if so, how many years they had taken lessons. Because it is common for students who engage in the region choir audition process to attend summer workshops to prepare for auditions that may provide additional mastery experiences such as small group rehearsals, performances of the audition music, and mock auditions, participants answered a single question indicating if they attended a summer all-state camp. Following the model of McCormick and McPherson (2003; McPherson & McCormick, 2006), to measure practice time, participants estimated the number of days practiced and average minutes of each session over the three weeks preceding the audition.

Musical Performance Self-Efficacy Scale (MPSES; Zelenak, 2011)

Although some researchers have used single self-report questions to measure musical self-efficacy, I used the MPSES in the current study as a robust measure of composite self-efficacy and the four sources of self-efficacy. I obtained permission to use the MPSES through email correspondence with the author. Using the principles of Bandura (1977, 1997), Zelenak developed the MPSES to measure self-efficacy in music performance among secondary school music students participating in large ensembles. The MPSES contains 24 statements that participants answer on a 100-point scale ranging from 1 (*strongly disagree*) to 100 (*strongly agree*). Of the 24-items, eight measure enactive mastery experience, five measure vicarious experience, six measure verbal/social persuasion, and five measure physiological and affective states. Researchers have established the validity of the MPSES by examining content, scale structure and relationships with other self-efficacy measures, and the relationships with other variables and the scale (Börekci et al., 2023; Zelenak, 2011).

In the current study, data generated by the MPSES showed excellent internal reliability (Kline, 2000) both for the composite self-efficacy construct ($\alpha = .88$) and for the subscales of enactive mastery experience ($\alpha = .75$) and verbal/social persuasion ($\alpha = .82$). Reliability statistics within this sample for vicarious experience ($\alpha = .50$) and physiological and affective state ($\alpha = .22$) raised concerns. I examined each subscale and discovered that the assumption of tau equivalence required for Cronbach's alpha was not met. Additionally, one question (question 23) in the physiological and affective state subscale had a negative loading to the factor. Accordingly, I removed question 23 from the subscale and using SPSS version 28, I calculated reliability using McDonald's Omega which is appropriate for scales where tau equivalence is not assumed (McNeish, 2018). Omega values can be interpreted similarly to Cronbach's alpha (McNeish, 2018) and indicated improved reliability for each subscale (enactive mastery experience, $\omega = .75$; verbal/social persuasion, $\omega = .83$; vicarious

experience, ω = .57; physiological and affective state, ω = .54). Although still low, Kline (2000) notes that for psychological tests, values below .70 can be expected and Nunnally (1978) suggests that in exploratory studies values as low as .50 are sufficient. Zelenak (2022) reported that internal consistency was lower for physiological and affective state and vicarious experience subscales when verifying the reliability of the scale and highlighted the difficulty in constructing items to measure these sources. Because the subscales have consistently been proven reliable in similar populations (Börekci et al., 2023; Zelenak, 2010, 2015, 2019) and omega reliability estimates were acceptable, I proceeded with analysis; however, interpretation of results of the subscales of vicarious experience and physiological and affective state was limited.

Procedure

Following school district and university institutional review board approval, I distributed printed parent consent forms via the choir teacher at each school to prospective student participants approximately two weeks before region choir auditions. I created the questionnaire using Qualtrics software version 10/2023 beginning with informed assent as approved by the university institutional review board. Pajares (1996) suggested that when comparing self-efficacy to an achievement-related outcome, measurements were most accurate when taken in close proximity to the performance. Therefore, I distributed surveys 24 hours prior to the region choir auditions and participants completed them before the start of the audition.

The region choir audition is part of the multi-level process leading to the all-state choir. Students auditioning in this round of the all-state choir auditions prepared individual choral parts from three choral octavos designated by the state music education association. Students performed a selected excerpt from three choral pieces with recorded piano accompaniment and sight-sang a single melodic exercise. Panels of five content experts who were members of the state music education association and completed the required training blindly adjudicated the eight voice parts in independent audition rooms. Blind ranking of musical performances by content experts given general task descriptions has proven to be a valid and reliable method for ranking musical performances (Smith, 2004). Similarly, in his study of the sources of self-efficacy and musical performance achievement, Zelenak (2019) found that ranking by a panel of content experts demonstrated properties of valid and reliable measurement as defined by the American Educational Research Association and provided an "authentic assessment of musical performance" (p. 69).

In this study, eight panels of five adjudicators evaluated voice parts independently and scored each excerpt for accuracy, musical style and interpretation, and vocal tone with a possible 100 points for each excerpt. The teacher participant who chaired the audition process provided digital copies of all scores and audition reports to the researcher. Each evaluator assigned a raw score ranging from 1 to 300 on the combined choral excerpts and from 1 to 60 for the sight-singing exercise. The software used for adjudication automatically

converted raw scores to ranks for each singer within their voice part. The highest raw score was assigned a ranking of 1. The highest and lowest rankings of the five-member judging panel were dropped, and the final ranking was determined from the three remaining scores. Using the three judge rankings included in the final ranking of each performance, I calculated Kendall's *W* for each adjudication panel (see Appendix Table A1) and found inter-rater reliability to be excellent, ranging from .91 to .99, indicating a high degree of agreement among adjudicators (Howell, 2013). Sight singing comprised 20% of the final score and the choral excerpt represented 80% of the total. I matched the official ranking of the participants to the completed surveys for analysis.

Results

Overall, participants reported high levels of composite musical self-efficacy beliefs (M = 1992.57, SD = 216.49). Scores ranged from 1477 to 2380 out of a possible 2400 (see Appendix, Table A2). To standardize each factor of the scale, I calculated z-scores for each subscale prior to examining correlations to the total self-efficacy score. Examination of scatterplots revealed violations of normality for some subscales. Therefore, I calculated Spearman correlations which are robust to violations of the assumption of normality for each source of musical self-efficacy and the composite self-efficacy score (see Table 1). As expected, there were moderate to strong correlations (Miksza, 2018) between each source of musical self-efficacy and composite musical self-efficacy.

Table 1.
Correlation Matrix for Self-Efficacy, Years in Lessons, Practice Minutes, and Achievement

Variable	1	2	3	4	5	6	7	8
1. Years in Lessons	—							
2. Practice Minutes	-.06	—						
3. Enactive Mastery	-.04	.23	—					
4. Verbal/Social Persuasion	-.07	.28	.79**	—				
5. Physiological State	-.26	.08	.46**	.46**	—			
6. Vicarious Experience	-.14	.05	.29	.25	.19	—		
7. Composite Self-Efficacy	-.19	.19	.80**	.76**	.66**	.61**	—	
8. Achievement	-.12	-.13	-.27	-.36*	-.01	-.04	-.20	—

* $p < .05$ **$p < .01$

Participants reported that in the three weeks before completing the survey and competing in the choral audition, they practiced their audition music on average 4.4 days per week (SD = 1.21) in sessions lasting 32.50 minutes (SD = 9.32). Approximately 83% of participants (n = 35) were enrolled in private voice instruction (M = 3.10 years, SD = 1.69) in addition to being part of their school choirs. Nearly all (n = 40) attended an all-state choir summer preparatory camp prior to the school year to assist them in preparing for the audition.

Before examining the relationships between music performance self-efficacy, practice time, and competitive ranking, I conducted ANOVAs to compare group means on composite self-efficacy by school, voice-part, those who attended preparatory all-state camps, and those enrolled in voice lessons. Because of the number of comparisons, I utilized a Bonferroni correction with an adjusted alpha $\alpha = .001$. There were no significant differences in composite self-efficacy scores between groups (see Appendix Table A3). There was, however, a general trend for increased self-efficacy as students progressed in grade level (see Appendix Table A4).

I calculated Spearman rank correlations to examine relationships among self-efficacy, practice time, years enrolled in private voice lessons, and achievement (i.e., competition ranking) (see Table 1). I was unable to make meaningful comparisons between those who attended all-state preparatory summer camps and those who did not, as only three participants indicated they did not attend a summer camp.

There was a moderate and statistically significant negative correlation (r_s = -.36, p = .02) between the verbal/social persuasion source of self-efficacy and achievement. Participants with higher verbal/social self-efficacy beliefs ranked higher (lower numbers). Years of private voice study, estimated practice time, and the three other sources of self-efficacy were not significantly correlated with achievement.

Discussion

The purpose of this study was to investigate the relationship between musical performance self-efficacy beliefs and achievement among secondary choral music students, specifically examining the relationships between the four sources of self-efficacy (enactive mastery experience, vicarious experience, verbal/social persuasion, and physiological and affective state), practice time, and other demographic variables. Relationships between each source of self-efficacy and the composite construct replicated previous findings (Zelenak, 2019). Unlike other studies, I did not observe a significant relationship between the composite construct of musical self-efficacy and achievement. However, like Zelenak (2019), I found the subscale of verbal/social persuasion to be significantly related to achievement. Results add to the body of research that reports no differences in self-efficacy beliefs among demographic variables of instrument and gender.

Enactive mastery experience had the strongest relationship with composite self-efficacy beliefs followed by verbal/social persuasion, physiological and affective state, and vicarious

experience. For the participants in this study, previous successful musical performance was integral to their belief in their overall musical ability. The results mirror those reported by Zelenak (2015, 2019) who observed the same relative influence of the four sources of self-efficacy on composite musical self-efficacy among middle school and high school students. Additionally, the findings align with the theoretical framework proposed by Bandura (1977, 1997), which positions mastery experience as the most influential factor of overall self-efficacy.

Although the positive relationship between composite self-efficacy and musical achievement has been confirmed in previous studies, the correlation was not significant in this study (r_s = -.20). The relationship is weaker than the mean effect size reported by Zelenak (2024) in a meta-analysis of previous studies of (r = .44). Like the instrumentalists in Zelenak's (2019) study, enactive mastery experience had the strongest relationship with the composite construct of self-efficacy. However, verbal/social persuasion had the strongest (and only significant) relationship with musical achievement. Those who reported higher scores on the verbal/social persuasion subscale of the MPSES received a higher ranking (lower rank number) from adjudicators, suggesting that feedback singers receive from peers, teachers, and family members may have a substantial influence on musical self-efficacy and thus achievement. The importance of the verbal/social persuasion source of music performance self-efficacy beliefs is similar to the results reported by Hendricks et al. (2016), who observed a positive influence of peer support on the self-efficacy of female orchestra students in a competitive ensemble, and Lewis and Hendricks (2022) who found that encouragement from music teachers positively affected musical performance self-efficacy. The findings contribute to the literature by replicating the results of Zelenak (2019) among a population of vocal students. Together, the two studies suggest that for music students, the verbal/social persuasion factor of musical performance self-efficacy may be particularly salient and warrants further investigation.

The composite self-efficacy score of participants in this study (M = 1992.57, SD = 216.49) was higher and demonstrated less variance than those reported by Zelenak (2011) among secondary music students (M = 1851.89, SD = 328.60) and similar to those reported in Zelenak's (2019) study among secondary instrumental students auditioning for elite ensembles (M = 2,019.60, SD = 206.81). The results of these studies suggest that musical self-efficacy may be higher among advanced students who audition for elite ensembles when compared to the general population of music students. Analysis of composite self-efficacy scores by the variables of grade level, voice part, gender, private voice instruction, and attendance at summer camp revealed no significant differences. The results were similar to previous studies that reported no differences in musical self-efficacy according to gender, instrument played, or musical context (band, choir, orchestra) (Cahill Clark, 2008; White, 2010; Zelenak, 2019). Studies that identified differences by grade level reported scores categorized by primary school, middle school, and high school. Therefore, it was not surprising to find no significant differences within this sample of high school students. I did

however observe a general increase in both the composite self-efficacy score and all four subscales as grade level increased. It is plausible that a relationship may exist between grade level or musical experience and musical self-efficacy but significant differences may only be detectable when examining a longer time frame than four years of high school or a larger and more diverse sample.

The results of this study have multiple implications for music educators. As McPherson and McCormick (2006) advised, those involved in the training and support of musicians must recognize the role of an individual's self-beliefs on their musical achievement. Considering the relationship of the verbal/social persuasion source of musical self-efficacy beliefs to achievement, the impact of feedback cannot be overstated. Lewis and Hendricks (2022) noted the importance of instructor feedback for collegiate vocalists, especially during the early stages of their vocal development. Negative comments from studio teachers reduced individuals' self-efficacy beliefs and caused some to leave the program or change voice studios while positive feedback encouraged them. Particularly when approaching performance, providing opportunities for musical affirmation from teachers, peers, and family members can be helpful for students. Because feedback from peers may influence musical self-efficacy more than feedback received from teachers or parents (Martin 2012), teachers might create opportunities for peers to provide verbal or written encouragement to those engaging in competitive performance. The accolades a musician receives from competitive achievement support the verbal/social persuasion component of musical self-efficacy. Therefore, teachers should consider public recognition of individual student achievement at performances and via written and digital communication. Contrastingly, the competitive atmosphere among individual performers might diminish an individual's self-efficacy beliefs (Hendricks et al., 2015). Therefore, emphasizing individual student musical accomplishment without an emphasis on competitive results may support positive musical self-efficacy. The music teacher is faced with the challenge of delicately balancing these conflicting factors of competitive music performance.

There are several limitations to the current study. The small sample from a single school district situated in a competitive environment may not be representative of the general population. Additionally, selection bias may be present considering the students participating in the study voluntarily chose to engage in a competitive music event. It is plausible that the student's desire to participate in the region choir audition may be correlated with higher general musical performance self-efficacy. Indeed, the self-efficacy scores within this sample were generally high. It is important to recognize that competitive ranking is only one possible measurement of musical achievement. The ranking included in this study considers both the performance of musical literature and sight-singing skills but may not represent a comprehensive measurement of musical achievement. Although the MPSES has consistently proven to be a reliable measurement for each source of music performance self-efficacy, the reliability analysis of the subscales of physiological and affective state and vicarious experience within this sample indicate that interpretation of the results

of these subscales within this population is limited. Although the relationship between musical self-efficacy and achievement has been established in the literature, the findings of this study, like Zelenak's (2019) study suggest that there are nuanced relationships between each source of self-efficacy and achievement. Researchers investigating the relationship between musical self-efficacy and achievement should consider using measurements of each source of musical self-efficacy in addition to the composite score. Future investigations using a larger, more diverse population of students and other measures of musical achievement are needed to expand the findings of this exploratory study. Researchers might employ quantitative and qualitative methods to examine differences in musical self-efficacy between lower- and higher-performing students or the effects of competitive success or failure on musical self-efficacy. Additionally, a better understanding of what behaviors and activities directly influence the verbal/persuasion source of musical self-efficacy would be helpful in providing instructional strategies to practitioners.

The positive relationship between musical self-efficacy and achievement underscores the importance of nurturing the psychological development of student musicians in addition to mastering music fundamentals and skills. Musical self-efficacy, particularly that derived from verbal and social interactions, is a crucial element of musical achievement. Therefore, integrating strategies that cultivate music performance self-efficacy beliefs may be an effective tool to support student success.

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Appendix

Table A1

Coefficient of Concordance (W) for Adjudication Panels

Adjudication Panel	Repertoire	Sight-Singing
Soprano 1	.92	.97
Soprano 2	.93	.97
Alto 1	.96	.98
Alto 2	.95	.98
Tenor 1	.95	.98
Tenor 2	.97	.96
Bass 1	.93	.99
Bass 2	.91	.97

Table A2
Self-Efficacy Scores Summary

Variable	M	SD	Maximum
Enactive Mastery Experience	682.02	89.01	800
Verbal/Social Persuasion	522.05	83.89	600
Physiological & Affective State	305.00	50.03	400
Vicarious Experience	388.79	66.96	500
Composite Self-Efficacy[a]	1992.57	216.49	2400

[a] Scale item 23 was removed from the Physiological and Affective State subscale but included in the composite measure.

Table A3
ANOVA Summary for Composite Self-Efficacy Scores

Variable	*df*	*F*	η^2	*p*
Grade	3, 38	2.44	0.16	.080
School	2, 39	1.63	0.77	.210
Voice Part	7, 34	0.90	0.16	.516
Camp Attendance	1, 40	0.74	0.18	.394
Voice Lessons	1, 40	0.70	0.02	.407
Treble/Tenor-Bass	1, 40	1.04	0.03	.315

Table A4

Self-efficacy Scores by Demographic Variables

Variable	Mastery Experience		Verbal/Social Persuasion		Physiological & Affective State		Vicarious Experience		Total Self-Efficacy	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Grade										
9th	597.25	123.11	403.75	90.66	291.75	64.97	377.00	103.79	1769.75	340.88
10th	657.50	92.56	519.83	78.64	272.42	45.64	399.83	39.01	1944.92	211.17
11th	710.07	79.06	551.36	48.44	323.64	45.97	380.71	84.79	2056.14	206.35
12th	702.08	68.78	529.50	45.36	320.25	40.99	391.08	59.02	2040.33	141.66
Lessons										
Yes	682.51	81.98	521.06	83.23	300.91	47.81	381.20	63.02	1980.00	190.80
No	679.57	126.66	527.00	93.79	325.43	59.72	426.71	78.25	2055.43	329.29
Camp										
Yes	678.46	101.44	519.22	89.11	304.43	50.23	384.95	74.23	1974.61	266.25
No	587.50	84.15	491.00	16.97	316.50	62.93	370.00	7.07	1863.50	169.00
Voice Part										
Sop 1	692.75	80.68	538.63	35.69	315.13	20.85	412.75	38.01	2055.63	178.56
Sop 2	733.50	29.14	568.75	46.26	302.50	20.62	381.50	93.29	2084.50	152.49
Alto 1	667.00	152.86	513.33	133.17	246.00	36.72	418.67	2.31	1940.00	300.04
Alto 2	670.20	75.94	520.60	72.94	283.60	33.69	420.80	78.37	1992.20	231.86
All Treble	691.40	82.41	506.14	65.54	294.35	48.21	409.40	58.45	2028.20	196.89
Ten 1	682.25	37.32	541.25	43.84	271.50	32.18	375.25	24.82	1969.00	16.37
Ten 2	671.33	121.34	540.50	65.60	345.00	56.33	378.50	114.19	2018.83	296.13
Bass 1	704.89	88.59	521.78	71.73	319.00	43.88	354.33	56.17	1996.78	214.63
Bass 2	572.00	76.54	365.00	172.22	298.67	54.04	393.33	54.85	1721.33	249.54
All Tenor-Bass	676.53	20.77	489.66	65.25	314.68	50.77	369.21	58.73	1974.89	220.13

Note. Mastery Experience ranges from 0 to 800; Verbal/Social Persuasion ranges from 0 to 600; Vicarious Experience ranges from 0 to 500; Physiological & Affective State ranges from 0 to 400; Composite Self-Efficacy Ranges from 0 to 2400